eBird

Reviewer Handbook

Review policies, instructions, standards, and guide to Review Tools and Filters

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Reviewer Essentials

Thanks for being a part of the eBird review team! Here's everything you should need to get started—the rest of the document outlines our review tools and best practices in more detail.

Where do I log in? https://review.ebird.org/admin/. Use your eBird username and password. Bookmark this link but note that ebird.org/admin also redirects here and is easier to remember.

How do I access records for review? There are two ways to access records for review:
- **Review Tools:** The *Review Tools* above is the primary interface to review records.
- **eBird checklists:** You can also access *Review Tools* by going to any checklist for your review area, clicking *Review* next to a sighting, and clicking the *Review* tab at the top left.

How do I review a record? To review a record: set a decision, apply a reason, add notes if needed. If more information is needed, click the *Email* icon next to the username to send an email for more information. The sending of the email triggers the record to be set as *Deferred*, and after 14 days the review will be finalized as *Documentation Inadequate*. When documentation is added, the record will automatically resurface; if the user replies to your email, please reopen the list and check the decision.

When you're ready to make a decision on a record, use the tools at the top to:
1. set the validity status to *Accepted* or *Unconfirmed*
2. choose a reason
3. add notes or comments and then click the green *Change* button.

Please also consider whether the checklist details are OK (location accurate, reported from single date). If not, you can apply a tag to the entire checklist to indicate that a problem was found.

Where do I change the data quality filter for my region? To change the automated filter that 'flagged' a record, click the *Filter* link on the right-hand side. This will open the filter and allow you to adjust the 'filter limits.' Once changed, new records below this threshold will not be flagged; older records will be removed with a filter *Run* if they do not yet have a final review decision. You can also make edits through the *Filters* tab on the upper right.

You are the face of eBird. You will often be the primary eBird contact point for eBirders in your region. Please maintain polite and helpful discourse with eBirders you reach out to. Most are genuinely interested in improving their checklists and documenting their sightings and are grateful to have an expert like you to correspond with. We of course also expect polite discourse from eBirders towards you—please reach out to eBird Central if there's ever conflict.

Review as a team when you can. In some regions, one reviewer will take on the role to help novice birders with their reports. *We strongly endorse review teams that include someone with this focus.* If you do not have an eBird tutor on your team, or if you are not regularly helping newer users yourself, please get in touch and consider adding a passionate eBirder who might be willing to fill this role and help eBird users in your region.

Thank you for everything that you do to make eBird's continued success possible.

Introduction

Thank you for your willingness to assist with reviewing eBird records. eBird reviewers like yourself are selected not only for their knowledge and skill with bird identification and understanding of bird distribution patterns, but also for your interpersonal skills and connections to the birding community. As an eBird reviewer, we hope you not only use eBird regularly but will set an example for best eBirding practices and will provide mentorship in your correspondence with eBirders. We strongly recommend that all eBird editors take the free, one hour eBird Essentials Course and understand how to communicate the basic concepts discussed in the course.

You will interact with eBirders of all skill levels, from rank amateurs to professional ornithologists. Humility and tact are essential in your correspondences, and we hope that the focus is on finding the truth and ensuring exceptional records are exceptionally well-documented.

You will represent the eBird project as one of the primary points of contact for our user community. Please do what you can to encourage users in a supportive manner and help build the eBird community. People make mistakes. We encourage you to contact and assist them. If you continually treat records as *Unconfirmed* without letting people know, they are unlikely to learn, will keep making the same mistakes, and this will ultimately take more time.

Data quality is of paramount importance at eBird. Many of us currently are on records committees or have been in the past, and we take documenting rarities very seriously. It is an ongoing challenge to identify and assess data coming into eBird. We will continue to develop new ways of exploring the data that will help to bring potentially erroneous records to light, but we depend on you to discover and assess these records in your region.

There are three main components to this document, Part I covers using the review tools, Part II covers filter creation and editing, and Part III covers important policies and guidelines.

NOTE: *This document is the 16 Mar 2020 version and is always available at this link in the eBird Help Center*: **https://tinyurl.com/eBirdReview**. *Please use this link to access the latest version of this document.*

Most importantly, thank you for your help in building eBird and making it better. Without you, eBird would not exist. If there is anything we can do to help, please contact us at any time.

Thank you,

Marshall Iliff: mji26@cornell.edu
Chris Wood: chris.wood@cornell.edu
Jenna Curtis: jenna.curtis@cornell.edu
Ian Davies: id99@cornell.edu

Part I: How to use the Review Tools

Important Terms to Know

The following terms appear throughout the Review Tools and this handbook. If you are reading this for the first time, please familiarize yourself with the following definitions (commonly occurring synonyms are provided in parentheses).

Species: a unique taxon from the eBird taxonomy including species as well as slashes, spuhs, subspecies groups, domestics, intergrades, forms, and hybrids (see Appendix B – Non-Species)

Record (Observation): a unique report of a species and its count; the most elemental piece of data in eBird.

Submission (Checklist): an aggregation of one or multiple records along with metadata (e.g., date/time, observer, location) related to a unique data collection event. While checklists may contain multiple observations, each observation is associated with only one checklist.

Observer (eBirder, User): people who submit records, via checklists, to eBird. Throughout this document we distinguish users (the individuals creating records) from reviewers (i.e., regional editors; the individuals reviewing records).

Each observer in eBird is tied to an email address and a name. Some individuals may have multiple eBird accounts, and other accounts may be "group accounts" shared among multiple observers. While almost all observers display their real name, some use an alias. It is also possible to set your public display name as "Anonymous eBirder" via the eBird account settings. When observers opt to use an alias or appear anonymously, we still show their real name in the Review Tools, but you'll see their alias if you click over to view the checklist page in eBird. However, we ask that reviewers respect an observer's decision to remain anonymous and not to share their first and last name with others.

Some users may opt to leave their first and last name blank, which is not preferred. As a reviewer, feel free to contact these users by email to ask them to enter their real name and then to set their display name in *Preferences* as they wish.

Location: can be thought of as the point on the map where the data collection event occurred, but is more specifically defined by a Location identifier (e.g., L2141044), each of which has a unique latitude and longitude for map display as well as other attributes like country, state/province, county, whether or not it is a hotspot, and sometimes other attributes (whether it falls within an IBA, National Wildlife Refuge, etc.)

Filter: an automated data-verification procedure that checks each record against a pre-defined maximum count of that species for that date. We consider a filter to be the full list of species for a given region (could be country, state, county, or a custom region), with each species having its own **Filter Limit**. For more on how filters are set and used, see the Filters section below.

Filter Limits: the specific count values within a date range for a species within the context of a filter. Any given filter is thus made up of filter limits for all species on the filter.

Flagged: when a record exceeds a filter limit, it is automatically labeled ("flagged") to indicate it needs consideration by a regional editor. The Review Tools are designed to help regional editors identify, examine, and assign final decisions to flagged records or checklists.

Review Decision, Status, and Reason: three separate designations that govern how and where records are displayed in the Review Tools and on public eBird output. Some of these designations are assigned automatically based on filters or reviewer actions, while others are manually specified by reviewers. See Review Decision, Status, and Reason below for more information.

Media: photographs, audio recordings, or video files. Observers should always add media directly to eBird checklists to ensure they are archived with Macaulay Library. eBird and the Macaulay Library are tightly integrated and review decisions on eBird observations or checklists also affect media in the Macaulay Library.

Documentation: any evidence added by an observer to support their record. Documentation consists of notes in the *Species Details* box and/or uploaded media files. Photos of sketches or field notes can also be considered as documentation but ideally should be tagged *Field notes/sketch* which is accessible from *Manage Media*. External archives, such as BRC files, photo websites (e.g., Flickr), or other web-based initiatives (e.g., iNaturalist) can also be link to for documentation, but none of these are guaranteed to be permanent, so the best practice is to ensure that all important documentation is stored within the checklist.

Accessing the Review Tools

Part I of this guide addresses the basics of logging in and viewing your records and reviewing each record from your queue. If you are reading this for the first time, please log into the Review Tools for your region and try to follow along with examples.

What browser should I use?
Review Tools are designed to work best in Safari, Chrome, and Firefox browsers (latter two are free downloads). We strongly recommend using one of these browsers; you may see issues when using other browsers.

How do I log in?
Go to this URL: https://review.ebird.org/admin/. If prompted to log in, enter your eBird username and password.

Your review assignment

Each reviewer is set up with at least one Review Assignment. Assignments usually correspond to a region (e.g., country, state, county) but can also be defined by *Arbitrary Polygons* (custom filter regions developed at Cornell). These Review Assignments show on your profile page and in the *Review Tools* and define what records you have access to in the *Review Tools*. Reviewers cannot review records from regions not included in their Review Assignments.

Please note that Review Assignments are particularly useful in *Quick Review* (see Quick Review section) since other filtering tools are not provided (e.g., filters by county, state, or species). If you review for an area larger than one county (or one state/province in areas that don't have counties in eBird) then it may be useful to have multiple review assignments for the purposes of filtering.

Get in touch with eBird Central for help setting up new assignments.

What if I can't see any records?
If you log into the Review Tools and see a message saying "You have no more records to review," please try logging out of eBird and the Review Tools and then logging in again. If you still aren't seeing records, try to search for a record of a fairly rare bird that you know has been recorded in your region (see Search Observations below for information on how to use *Search*).

If you still do not see any records, please contact us, as there may have been an error in setting up your Review Assignment.

Navigating the Review Tools

When you log in you are automatically taken to the Review Observations page. Several tabs are found on the top of the page, each corresponding to a different tool discussed in greater detail below:

The Review Queue

Once logged in, you'll immediately see your *Review Queue*, which is the complete list of records awaiting review. See the section How are records flagged for the Review Queue? to understand what records appear here and how.

The top portion is an annotated screenshot. Callout boxes:

Submission is the unique identifier assigned to a checklist. Click to view the entire checklist in Review Tools and get a link to view the checklist in eBird.

Species displays the name of the reported species according to your preferences (Bird Names in eBird). See "Sorting Records" for more information on *Alpha, Tax,* and *Cat*.

User shows the observer's name. Click to open a window containing information about the observer. Click the email icon to automatically generate an email asking the observer for more information about the record.

County and **State/Province** where location occurs, if applicable

Click the Filter link to view/edit the filter values for this species at this location

eBird Review Tools | Review | Quick Review | Search | Filters | Tools | Hotspots | Marshall Iliff (miliff) | Sign Out

Review Observations

Filter List... | 2007 found (showing 1 - 25) | Show 25 per page | 1 | 2 | 3 ... 8

Select and change... Review decision: | Reason: | Notes: | **Change**

☐	Submission	Species - Alpha|Tax|Cat	Note	Count	Date ▾	User	Location	County	St/Prov	Review decision	Status	
☐	S65843530	Pearled Treerunner *Margarornis squamiger*	💬	1	Mar 15, 2020	Cristian Mur ✉	RNA El Dorado--Lodge		MAG (CO)	Unconfirmed	Unreviewed	Filter | History
☐	S65843530	Glossy-black Thrush *Turdus serranus*	💬	1	Mar 15, 2020	Cristian Mur ✉	RNA El Dorado--Lodge		MAG (CO)	Unconfirmed	Unreviewed	Filter | History
☐	S65843530	Buff-rumped Warbler *Myiothlypis fulvicauda*	💬	1	Mar 15, 2020	Cristian Mur ✉	RNA El Dorado--Lodge		MAG (CO)	Unconfirmed	Unreviewed	Filter | History
☐	S65789957	Tricolored Munia *Lonchura malacca*		1	Mar 14, 2020	Luis Delgado ✉	Quinta de San Pedro Alejandrino		MAG (CO)	Unconfirmed	Unreviewed	Filter | History
☐	S65664502	Wilson's Phalarope *Phalaropus tricolor*	💬	6	Mar 10, 2020	Ann Denburgh ✉	Ciénaga, Santa Marta, Magdalena		MAG (CO)	Unconfirmed	Unreviewed	Filter | History

Check boxes select specific records to take review action. You can select multiple records and apply the same action to all of them OR select the check box at the top of the column to select ALL records in the queue. **Please use the *select all* option with caution. Most mistakes in review happen when you select too many records at one time.**

Count displays the number of individuals of the reported species

Date shows the observation date

Name of the **Location** where observation was made. Click on a location name to see its placement on a map.

For information on **Review Decision** and **Status**, see "Review Decision, Status, and Reason" section.

Click **History** to view the *Observation Page* with full details of a record, including its prior review history

The **Note** column displays an icon indicating the type of documentation included with the record. A speech bubble indicates written comments; a black arrow indicates a URL link (hopefully to a photo of the bird) in the written comments; headphones indicate an audio recording; a small camera indicates an embedded photo (hopefully of the bird in question); a movie camera indicates an embedded video. *Placing your mouse over the icon allows you to quickly view its associated documentation. Clicking the icon takes you directly to that Observation Page in the Review Tools.*

Sorting records

Records on your review list are sorted by observation date, with the most recent records first. You can change the sort order by clicking a column heading, such as *Location* or *User*. Most sort options are self-explanatory, but a few require extra explanation:

- **Species:** You can order species alphabetically (*Alpha*), taxonomically (*Tax*), or by category (*Cat*). Sorting by category (*Cat*) clusters by taxonomic category (species, subspecies group, spuh, slash, hybrid, intergrade, form, domestic) and then sorts taxonomically within each cluster. This can be a useful way to quickly process subspecies, slashes, and spuhs, which often are valid submissions but may not be regular options on the filter.

- **Status:** You might also wish to sort based on *Status*. This is especially useful to look for records that are *Deferred* or *Rereview*, since these require special consideration. See Review Decision, Status, and Reason for more on *Status*.

- **Submission:** Clicking *Submission* sorts by the checklist submission identifier, which clusters all observations within a single checklist together. When this column is sorted in ascending order, the oldest checklists (by submission date) are at the top; when descending, the most recent are at the top.

Filtering your Review Queue

Click *Filter list* (near the top-left of the page) to subset the records in your *Review Queue*. Select or type a value by which to filter the records. Common ways to filter records are by a specific date range to work only on recent records, or by species to focus on a well-known rarity with many flagged records. Note that you can also remove records from the Great Backyard Bird Count, if that event is underway and is filling up your *Review Queue*.

What records appear in the Review Queue?

Records are "flagged" for the Review Queue primarily through an automated process involving expert-created filters (see Part II for more on filters). These filters set expected counts by date for each species in each region. Records are flagged by filters for the following reasons:

- **Rarity:** a species that is rare or unusual in the region; these species are set to a limit of zero year-round on filters.
- **Out-of-season report:** a species reported outside its normal date range in a region; these filters are set to zero for that species only within a certain date range.
- **High count:** a species count that exceeds a non-zero filter value, which represents the maximum number one might expect to find in the region on a particular date.
- **Not on checklist:** meaning the species is not included on your filter at all. Examples include a first state record, a record new to the region, exotics, hybrids, or even regular subspecies or spuhs (e.g., scoter sp.) that are not shown on the current checklist. *If the bird is expected and deserves to be on the list of species, please be sure to add it to the filter! Note that we don't recommend including all subspecies options, but distinctive and well-known ones should be included, especially when two or more occur in a region.*
- **Post-submission edits:** certain edits made by users (e.g., change of species, change of date of observations, or increase in the count) will trigger a re-check of the filter and that may result in the record being flagged after initial submission.
- **Records for Rereview**: There are several additional ways that a record can appear in the Review Queue. They all appear with Statu*s* of *Rereview*, highlighted in orange. Please see Rereview Status below for more on these.

How often are flagged records added to the Review Queue?
Records are harvested by the "Review Robot" once an hour for the *Review Queue*. Any newly-submitted or recently-edited record that is not already in the *Review Queue*, and exceeds a filter, will be added at this time.

Why was this unexceptional record flagged for review?
If a record is harvested for the *Review Queue* because of a high count and the eBirder later reduces the count to a value that is not flagged by the filter, this ***does not*** remove the record from the *Review Queue*. This can sometimes make it seem as if the record was flagged erroneously. The last edited date on the Submission Page may be helpful, since it could show an edit since the record was flagged, but ***note that reviewers sending emails are also logged as changes here***. These records are usually easy decisions and can be accepted using a Review Reason of *Record-Not exceptional* (See Appendix A).

Review Decision, Status, and Reason

Reviewing consists of assigning a Decision, Status, and Reason to each report in your queue. Therefore, before you can commence the review process, it is critical to understand what these different designations mean.

Review Decision

Review Decision can be either *Unconfirmed* or *Accepted* and governs whether a record is displayed publicly on eBird. Only *Accepted* records appear in all forms of eBird science products (e.g., eBird Basic Dataset, Status & Trends) and eBird output (maps, graphs, etc.). *Unconfirmed* records are not shown in public eBird output or science products with two exceptions: Alerts and Media searches (or galleries), which may show and clearly indicate *Unconfirmed* records submitted in the past 7 days that are also *Unreviewed*.

Review Decision has no bearing on personal data displays for observers (e.g., Life Lists, other list totals, profile maps, Top100 totals). Both *Accepted* and *Unconfirmed* species are displayed in full, without indication of Review Decision, on an eBirder's personal checklists.

Note: These decisions were previously referred to as *Valid* and *Not Valid* but were changed to *Accepted* and *Unconfirmed* in July 2018. These terms more directly express the decision by the reviewer and are less pejorative. We ask that reviewers refer to the process in this way in public correspondence.

Review Reason

The review reason is a short explanation for your review decision. ***Please make sure you fully understand the*** [***Review Reasons in Appendix A***](#)***.*** The drop-down lists show review reasons specific to *Accepted* or *Unconfirmed* decisions. In order to *Accept* or *Unconfirm* a record you **must** provide a reason. This is very important, since your decisions may be reconsidered later if there is no reason to defend why a certain action was taken. Review Reason is always selected by the reviewer except when *Deferred* records exceed their time limit (see *Deferred* status below) when this process is partly automated. (Note however that older review decisions will not always have review reasons.)

Review Status

Review Status is a designation set by automated processes or by reviewers. A record's Review Status can be:

Unreviewed
Indicating that a record has not been assigned a Review Decision by a human reviewer. *Unreviewed* records in the *Review Queue* need your attention. However, the vast majority of records shown publicly on eBird are also *Unreviewed*, since they are presumed to be correct if they passed through filters without being flagged.

Reviewed
Indicating that a human reviewer has looked at the record and applied a Review Decision. In most cases, *Reviewed* records need no more attention. You will see this status primarily when using the *Search* functionality. Note that *Reviewed* records are ignored during filter runs.

Rereview
Indicating a record has been highlighted for reconsideration or secondary review. Any record with a Status of *Rereview* is highlighted in orange and should be treated as a high-priority case where a review error may have been made, or where new documentation may allow the Review Decision to be changed to *Accept*.

Records can appear in your *Review Queue* with the *Rereview* status if:

- **Species-Rereview Requested:** Regional editors that have review permissions in your region, including eBird Central staff with global permissions, may set a record decision to *Rereview* to ask that you give it a second look. These appear with the reason *Species-Review Requested* (see Appendix A).
- **Media flagged:** Media Reviewers have the ability to flag photos, audio, or video they believe to be incorrectly identified. This will cause even previously *Accepted* records to appear in the *Review Queue*. These appear with the *Species-Media ID Questioned* reason (see Appendix A).
- **Media added to *Unconfirmed* record:** Any record marked *Unconfirmed* that then has media added will resurface for *Rereview*. This gives the reviewer a chance to decide if the record was actually correct.
- **Media moved to or from *Unconfirmed* records**: Any record with misidentified media should be marked *Unconfirmed* after notifying the user. Transferring media to or from a record using Change Species also triggers any record to be set to *Unconfirmed*, *Rereview*. For example, if a Parasitic Jaeger record has a count of two individuals, two photos of Parasitic and one photo of Long-tailed, the observer should be notified to move their misidentified photo to the correct species. Supposing the Long-tailed Jaeger had also been marked *Unconfirmed* (perhaps for lack of documentation!), transferring the photo to Long-tailed Jaeger would ensure that a reviewer would review it again and we would also want a reviewer to check that the Parasitic Jaeger photos and count are now correct (probably the observer should tally one Parasitic Jaeger now). If Change Species is not used, there is no automated way to re-flag these records; please rereview if found though!
- **Notes added to certain records:** Any record with a reason of *Documentation Inadequate* (including *Documentation Inadequate-Species* or *Documentation Inadequate-Count*) will resurface for review if documentation is edited or added, including adding media or editing comments. This applies to records with a status of *Deferred* or *Unconfirmed*.

☐	S29095045	Green-tailed Towhee *Pipilo chlorurus*		3	Feb 25, 2016	Anuar López ✉	Presa Santiago, Miguel Azua	DUR (MX)	**Unconfirmed**	Unreviewed	Filter | History
☐	S50901388	Cassin's Finch *Haemorhous cassinii*	💬	1	Nov 15, 1976	Ray Wershler ✉	Old Hwy 40 - E of Durango	DUR (MX)	**Unconfirmed**	Unreviewed	Filter | History
☐	S61895996	Sharp-shinned Hawk *Accipiter striatus*	📷	1	Nov 30, 2019	José Hugo Martínez Guerrero ✉	Ciénagas Los Álamos	DUR (MX)	**Unconfirmed**	**Rereview**	Filter | History
☐	S59823593	Ring-billed Gull *Larus delawarensis*	💬	5	Sep 14, 2019	Isain Contreras ✉	Laguna Santiaguillo	DUR (MX)	**Unconfirmed**	**Rereview**	Filter | History

Click on a *History* link in the *Review Queue* to learn who has flagged the record for *Rereview*; click the name to contact that reviewer for information regarding the *Status* change.

Deferred

This new status, introduced with *Quick Review*, is very important to understand. *Deferred* indicates a reviewer has sent the observer a request for more information and is pending reply.

How to *Defer* a record: There are two ways to set a record's status to *Deferred:* 1) when an email is sent from traditional review, or 2) when the *Defer* button is used in *Quick Review.*

What happens to records when they are *Deferred?* *Deferred* records remain in the *Review Queue* for 14 days and also appear on eBird Alerts if the observation date is within the past 7 days (the period of eBird Alerts). Once the 14-day period has elapsed, the *Deferred* record will be marked *Unconfirmed* and *Reviewed* **if it is a record that exceeds the filter limit.** If at any time the observer adds media, or if records tagged as *Documentation Inadequate* have edits to *Species Details,* the record will appear in the queue with a status of *Rereview* and will remain visible until a reviewer makes a final decision. If the record is marked *Unconfirmed* after the *Defer* period expires, a Review Reason will automatically be added depending on whether the observation was set to *Deferred* status in Quick Review or the traditional review tools.

- If reviewed from *Quick Review*: a custom reason will be added according to which of the the *Defer* review reasons was selected.
- If reviewed from the traditional review pages, including the *Review Queue*, the reason *Documentation Inadequate* will be used.

Importantly, if the record would not be flagged by the filter (i.e., exceeds the filter limits), it will return to a status of *Accepted* and *Unreviewed* when the *Defer* period expires or when a filter is rerun. These records that are allowed by the filter remain that way until a reviewer makes a final decision on the record (including *Rereview*). Therefore, we strongly recommend reviewing such records immediately after sending the email or setting them to *Unconfirmed* and *Rereview* if you want to keep them visible. Note also that records that are *Accepted* (including those that are *Accepted* and *Deferred*), do not have their status changed when comments are edited or documentation is added. For these reasons we recommend treating such records as *Unconfirmed* immediately after emailing an observer for more information; records set to *Rereview* will appear on Alerts and also remain in your queue, so please use that option if appropriate.

When to use *Defer*: We recommend using *Defer* for records that may be correct, but where more information is needed. The main reason to *Defer* a record is to retain its visibility in Alerts (occasionally a reviewer may want to retain visibility of the record in the *Review Queue* for two weeks).

It is very important that reviewers use *Defer* correctly: if the record can be resolved immediately, we recommend that you do so. If the record can be assigned a tentative final decision, we also recommend implementing this immediately. Remember that the record will return to the Review Queue if the eBirder adds media (or uses *Change Species* to adjust media) to the record for any *Unconfirmed* or *Deferred* record. For records *Reviewed* or *Deferred* with reason *Documentation-*

Inadequate, the record will return to the Review Queue if the eBirder adds or edits their *Species Details*. These will appear as *Species-Rereview Requested* and a *History* line will be added to explain what happened. If the observer just replies to your email, you should have the checklist link accessible in the email to check on the decision also. Records from past years almost never should be *Deferred*, and it is better to make a tentative decision immediately with the understanding that addition of more documentation will also give an opportunity to reassess. **Important:** emailing from the traditional *Review Queue* does set a *Deferred* status; please make sure to be aware of the implications of this and perform a second review immediately, if needed.

Deferred **records will not appear in** *Quick Review* but do appear in the *Review Queue*. Any *Deferred* record in the *Review Queue* can be set a final status of *Unconfirmed* or *Accepted* at any point.

How do I keep *Deferred* **records for more than 14 days?** Any record, including *Deferred* records, can be kept in your queue for longer than 14 days by setting the decision to *Unconfirm* using the reason *Species-Rereview Requested*. This will change the status to *Rereview* and keep the record in the *Review Queue* indefinitely.

How are *Deferred* **records are displayed in eBird?** *Deferred* records do not appear in public eBird data (maps, graphs, etc.) but will continue to appear with the *Unconfirmed* tag on eBird Alerts (if within the 7-day window of the Alerts). This can be useful so that area birders are alerted to a possible rarity and can assist in providing documentation.

How are *Deferred* **records displayed in Review Tools?** When a record is set to *Deferred* each action is recorded in the record's *History* on the observation page. Using the *Defer* option from *Quick Review* will set two records at the same time: one for the default email being sent and one for the preliminary decision. In the below example, once the 14-day window expires, another *History* line will be added that sets the record to *Unconfirmed* with the reason *Documentation Inadequate-Species*.

Obs Review History					
Date	Reviewer	Review decision	Status	Reason	Reviewer notes
Jan 6, 2020 - 11:12 PM	Marshall Iliff	**Unconfirmed**	**Deferred**	Documentation Inadequate-Species	
Jan 6, 2020 - 11:12 PM	Marshall Iliff	**Unconfirmed**	**Deferred**	Email-Documentation requested	
Jan 1, 2020 - 11:44 AM	Review-Robot	**Unconfirmed**	**Unreviewed**	Species-Flagged by filter	EBIRD review robot; assumed checklist count limit problem.

Sequence of the eBird Review process

Having a fundamental understanding of the *Review Queue* and terms, you are now ready to review records. The majority of records are very easy to review, and simply require a quick look at the date, location, count, and documentation for the species. This is especially true in *Quick Review*, which is specifically designed to highlight these key elements for quick assessments. However, we hope that during this process reviewers are mentally checking three main factors in sequence:

1) **Is the checklist acceptable?** Your first step in any review should be to consider whether the checklist is suitable for public display in eBird. In almost all cases the answer is yes, but if it is not (i.e., location is not accurately plotted, date is inaccurate or spans multiple days, is an obvious life list entry, or is otherwise unsuitable for eBird's scientific database) then the entire checklist should be reviewed: see Checklist-level review below. The investigation of checklist-level issues is important because a problematic checklist likely will also include additional *Accepted* records, but these should not be used for science or public output if the entire checklist is problematic.

2) **Is the observation acceptable?** Review and assessment of the species identity and count is the core of the eBird review process. Remember that the filters are not perfect and may flag expected species (or fail to catch unusual ones). Every review should focus on the documentation provided but should also consider the record in context. The nuances of this decision are discussed at length below.

3) **Is all media in the checklist correct?** All photos, audio, and video from *Public* checklists and *Accepted* observations are used in media galleries and other products in the Macaulay Library. For this reason, it is important that reviewers also help to address errors with media. It is not uncommon for birders to make mistakes uploading media. These cases are discussed in detail in the Media review section.

If all three elements of an observation are OK, in the reviewer's opinion, the report can be *Accepted*. If any has a problem, the issue should be addressed as discussed in the sections below: Checklist-level review, Observation review, or Media review. These are not listed in this sequence below, since Observation review is by far the most common scenario.

How to Review Observations

The basic task here is to *Accept* or *Unconfirm* unusual species and numbers. **Please try to keep your list of review records as short as possible by reviewing the observations on a regular basis.** Remember that review decisions remain in the database and any observation can be rereviewed at any time.

Reviewing Observations from the Review Queue

Each row in the *Review Queue* has the basic information you will need to review a record (either directly on the page or through links). Some records will require you to examine the record's to contact the observer for details or to check the observation page., which provides a useful link to *Quick Review*. The process below describes the basic method by which records are reviewed on any page of the Review Tools.

Select one or more records on which to work by marking the checkbox(es) on the left side of each record. Use the green bar above the Review Queue to carry out the following review actions on selected records in your list:

1) **Assign a Review Decision:** All flagged records are initially set to a *Review decision* of *Unconfirmed*. If you are satisfied the record is correct, select *Accept* from the drop-down menu in the green bar next to *Review decision*. If you think the record should remain *Unconfirmed*, select that option from the drop-down menu instead.

   Your decision whether to *Accept* or *Unconfirm* a record should be based primarily on the documentation, as well as the core elements of the observation (date, location, count, observer experience). Some records can be confirmed without documentation, while others that are exceptionally unusual may not be acceptable without photos.

2) **Apply a Reason**: See Appendix A for an explanation of each Review Reason.

3) **Add Notes**: The green bar above the *Review Queue* provides a place to copy and paste pertinent reviewer or observer notes, links to photos, as well as written details on the record. When an observer replies with details, you should ask him/her to add the details into their *Species Details* in their eBird checklist itself. If the observer does not do this, you should paste them here so that a permanent record of the documentation is maintained within eBird. You (and other reviewers) will be able to see anything that you add here. It is very important to keep these comments professional and polite; the reviewer network will expand and this is a field that is permanently stored with the record and will be seen by those other than yourself.

4) **Click "Change"**: This small but important step ensures any review actions are saved with the associated record.

Contacting the observer for more information

If there is insufficient documentation to make a review decision: skip the steps above and instead click the email icon next to the observer's name to send them a pre-drafted email requesting details. This will mark the record status *Deferred*. Use *Quick Review* to access specific templates connected to the *Review Reason*.

Remember, if a record is *Deferred* after emailing the observer and you would like to keep it in the queue for longer than 14 days, assign the record a review decision of *Unconfirmed* with a reason of *Species-Rereview Requested* using the steps above.

Reviewing multiple records

Often, you will have multiple records that you want to approve at one time and to which a single *Review Reason* can be applied. This is most frequent when there are several reports of the same bird by numerous observers. Simply select the check boxes next to each record for which you want to apply the same review action, change the decision and reason in the green bar on top of the list, and then click the *Change* button. You can use Shift + click to select a string of multiple records. **Again, please use the *select all* option with caution. Most mistakes in review happen when you select too many records at one time.**

The eBird Observation Page

In some cases, you may need more details than are provided in the Review Queue to *Accept* or *Unconfirm* an observation. Additional information for the entire checklist can be found by clicking the link (Submission ID) in the *Submission* column (see Understanding an eBird Checklist below).

Additional observation-specific information can be found by clicking the *History* link on the right side of each item in the list or, if the observation includes documentation, by clicking any icon in the *Note* column. The Quick Review page for that record is accessible by clicking *Quick Review* next to the *View Filter* link and above the Species and Observation details; this can be useful to access specific email templates (e.g., *Species-Misidentified*, *Documentation Inadequate-Count*, etc.). ***For Rereview records, you should always check History***.

Try clicking *History* from the Review Queue, which will take you to an Observation page like this:

Additional notes about the Observation Page

Count: Counts of zero are allowed, but strongly discouraged. Reporting zero in eBird does cause some system bugs and is almost never needed: submission of a complete checklist (i.e., reporting all species identified) assumes that anything not reported had a count of zero.

Checklist Comments: eBirders can opt to show or hide these in the public checklist view, but these are always visible to reviewers in the Review Tools (when present). It is often a good idea to check these before *Unconfirming* a record since they may contain information on other observers, whether a photo was taken, and whether the observer was aware of the rarity of the sighting.

Review History may include line entries for review actions such as:

- entries for when a record is initially flagged by a filter
- any actions that remove or add a record to the Review Queue
- certain observer edits that have a bearing on review *Status*
- any *Review decision* made by a reviewer.

Accepted records that are *Unreviewed* typically show no *History* since they have never been flagged by a filter.

Reviewing a record from the Observation Page proceeds in the same sequence as [Reviewing Observations from the Review Queue](#) using the green bar above the Review History.

The eBird Checklist Page

Each eBird observation is part of an eBird checklist, also known as an eBird Submission or "sub." Viewing the entire checklist also may give you information to assess the experience of the person reporting the record. If the checklist contains a number of questionable records, you may be more inclined to *Unconfirm* flagged observations without further investigation. ***Verifying the overall acceptability of a checklist should be the first step in your review process.***

Each checklist is defined by a unique Submission ID (e.g., S45355741) which is also part of the URL for the checklist page in eBird (e.g., https://ebird.org/checklist/S45355741). Try clicking the Submission ID from the *Review Queue*, which will take you to a Submission page like this:

Whether the checklist is *Public* or *Not Public* is indicated on both the public eBird page and here on the Submission Page

Click the Observer name to see key details about them. Click the Location to see it plotted on a map.

The selected eBird protocol is displayed here. Traveling, Stationary, and Incidental are the most common.

All Obs Reported? Is the equivalent to "Checklist Complete?" A yes/no indication as to whether all species were reported OR whether species present and observed were intentionally unreported. It is critical that eBird reviewers understand this distinction.

Checklist Comments (also displayed in Observation View) may be hidden from the public by the observer but are always displayed here when provided.
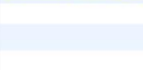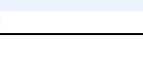
Click here to see the checklist in eBird

Submission S45355741

View in eBird

Public
Created:
2018-05-06 10:58:42 EDT
Last edited:
2020-01-15 12:25:20 EST

OBSERVER:	Marshall Iliff	PROTOCOL:	Traveling
DATE:	May 05, 2018	EFFORT:	2 hour(s), 8 minute(s)
TIME:	5:17:00 PM	OBSERVERS:	7
LOCATION:	Palermo--Camino Km 4	AREA COVERED:	
COUNTY:		DISTANCE COVERED:	1.031 mile(s)
ST/PROV:	MAG	ALL OBS REPORTED?	true
COUNTRY:	CO	ELEVATION:	

CHECKLIST COMMENTS: We returned to our favorite coastal spot and found it to have changed significantly with yesterday's heavy rains. First, the dry earth entry road was now slick mud, like caliche roads in Texas, which behaved like an ice skating rink giving our car no traction but not really putting us at risk of getting stuck. We slipped and slided our way in to the parking area and then walked out, to find that the impoundments were more flooded and the tern feeding activity was less concentrated but involved a welcome two new species: Yellow-billed and Black. The Black Terns, and maybe a couple other species here, maybe were the result of recent rains. The swallow show was essentially non-existent. Like before, we did not make it to the back of the impoundment until after dark and could not really fully check the shorebirds, although we did manage to fid our rarest bird of the day (long-billed Dow) by cal note after sunset. The mosquitoes were horrific at dusk, but the avian soundscape amazing with roosting herons, shorebirds, and calling Large-billed Terns, skimmers, and whistling-ducks all creating a chorus like we have never heard before. Global Big Day with Team Sapsucker, beginning at the top of Cuchilla San Lorenzo and finishing at the coast in Vía Parque Isla de Salamanca. An amazing day, with almost 300 species (289) recorded.
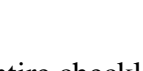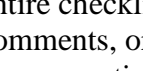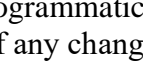
Mark checklist not public with reason ▾ Notes: ▱ **MARK CHECKLIST NOT PUBLIC**

Observations

Select and change... Review decision: ▾ Reason: ▾ Notes: ▱ **Change**

☐ Species - Alpha|Tax|Cat	Count	Review decision	Status ▲	Observation Comments	Uploaded Media	
☐ Northern Screamer	1	Accepted	Unreviewed	totally awesome lifer seen perched up on a tree here and then seen again as we left after dark; a hulking and amazing bird which was a complete thrill to see here!		Filter | History
☐ White-faced Whistling-Duck	35	Accepted	Unreviewed	a couple flocks seen before dusk and heard after dusk		Filter | History
☐ Black-bellied Whistling-Duck	14	Accepted	Unreviewed	one flock of eight, a lone bird seen later, and another 5 or so heard after dark; the one bird seen close was clearly D. a. autumnalis with the gray breastband typical of that subspecies		Filter | History
☐ Blue-winged Teal	175	Accepted	Unreviewed	A few scattered birds, but the majority were in the muddy impoundment which was full of ducks and this was from a quick count by tens by Marshall		Filter | History
☐ White-cheeked Pintail	60	Accepted	Unreviewed	Almost all were scattered amongst the Blue-winged Teal and counted quickly by Marshall on a scan of the muddy impoundment		Filter | History
☐ Least Grebe	4	Accepted	Unreviewed	along muddy impoundment edge; presumably we just missed the additional birds present here on our previous visit?		Filter | History
☐ Pale-vented Pigeon	2	Accepted	Unreviewed	flyovers		Filter | History
☐ Common Ground Dove	2	Accepted	Unreviewed	in tree on dike spotted by Tim		Filter | History

Additional notes about the Checklist Page

Importantly, **Last Edited Date** is only visible on this page and applies to the entire checklist. Changes that update the *Last Edited Date* include edits to the date, location, comments, or any species count, and could also include any decision by a reviewer, or even a programmatic change like a hotspot merge or a taxonomy update. We don't detail the exact nature of any change.

The metadata (effort metrics such as start time, duration, distance, etc.) displayed on the Checklist Page will vary depending on the protocol used and other specifics. Some effort metrics, such as automatic *Mobile information tags* from eBird mobile, are only visible on the public checklist page. Other metadata, like the GPS track associated with a traveling checklist from eBird Mobile, are visible only to the checklist owner(s).

Public/Not Public: In almost all cases, reviewers can change a checklist from *Not Public* to *Public* or vice versa. See the next section; see also our page about The eBird Data Quality and Review Process.

You can also review observations on the *Checklist Page* by selecting the checkboxes next to the species that require action and then proceed as detailed in Reviewing Observations above.

Checklist-level Review

The first question you ask during eBird review should be whether there are problems that apply to the entire checklist. There is no need to spend time reviewing individual records if there is a problem with the entire checklist, such as:

- Excessive distance (typically greater than 15 miles)
- Location or date appear incorrect
- The wrong protocol is used
- Checklist is a duplicate
- Checklist is a combination of multiple parties' lists
- The checklist is a "life list" (i.e., multiple locations and dates in a single list)

When problems apply to the entire checklist, mark the checklist *Not Public* in the upper green box on the Checklist Page. A reason is also required, as it helps other reviewers to understand the rationale for treating this checklist as *Not Public*. Adding *Notes* is recommended. The Checklist-level review reasons are listed and explained fully in Appendix A.

There are at least two other common issues that are problematic; please email users to educate them and ask them to fix these. However, we don't recommend marking checklists *Not Public* for these reasons alone. We hope to develop more refined solutions for these issues in the future, and the first is already amply dealt with in eBird's Status and Trends analyses.

- Checklist is marked complete, but seems very unlikely to be so (only includes a rarity or two, etc.)
- The count for all species is '1' but should be 'X'

How are **Not Public** *checklists hidden from eBird output?*
When you mark a list as *Not Public*, none of the observations on the checklist will appear in public eBird output, in Review Tools search output (unless you specify that you wish to include *Not Public* lists in your search), or in scientific output. The checklist view in eBird will always show a message explaining why the checklist is *Not Public*.

Can I review records on **Not Public** *checklists?*
Even though individual records may be correct on a given list, these cannot be reviewed until the checklist is treated as *Public*. This is because the review process is hierarchical: without correct checklist-level information, the individual observations are also not appropriate for public display in eBird. Once the checklist has accurate information and has been changed to *Public*, its records can be reviewed. It may sometimes be necessary to assist observers with correcting the checklist so that an important rarity record can be displayed publicly.

How do I contact an observer regarding checklist issues?
If you wish to email the observer, there are currently two ways to do this: 1) with the checklist set to *Public*, click the email icon next to an individual record, and add a note of your own at the top of the email explaining the checklist-level issue and your question about it; be sure to mark the checklist *Not Public* after notifying the observer; 2) click the observer's name, copy the

email, and compose a note of your own. In this case it is helpful to include the checklist link. In the future, we hope to add a simpler way to contact observers about checklist-level issues.

What happens when checklists are changed from **Not Public** *to* **Public?**
Most checklists that are marked *Not Public* can also be changed to *Public* by you. No reason is required for this. Once the checklist is made *Public*, it is treated as a new submission: any records that are flagged appear in your review queue as *Unconfirmed* and *Unreviewed* while those that are not flagged appear in public output as *Accepted* and *Unreviewed*. **This is true even when a flagged observation received a final review decision prior to checklist review.** *Obs History* on the Observation Page keeps a list of these earlier reviews, which may be helpful for reviewing them a second time.

A note regarding Checklist-level Review before 2018
Prior to the August 2018 release of checklist-level review, reviewers would select all observations on a problematic checklist and mark them *Unconfirmed* using a Checklist-specific review reason. Starting in June 2018, those review reasons were separated out in a distinct Checklist-level review process. We then revisited all previously reviewed records. Any *Unconfirmed* observations with a Checklist-specific review reason had that decision and reason applied to the entire checklist; these dates will be between June-August 2018.

It is possible that some checklists were erroneously marked *Not Public* during this transition because a single record was inadvertently given a checklist-level reason instead of an observation-level reason. When these are identified, we recommend marking the checklist *Public* and then reviewing individual observations as needed.

Automatic Checklist-level Reviews
There are several situations that result in actions being taken on checklists that bypass your Review Queue.

- **Country, State, or County-level Checklists:** if the observer chooses "Select an entire city, county, or state" on the data entry page. County-level or broader locations should only be used if the observer lacks more precise location information, since these observations can't accurately be displayed on a map. These records are automatically marked *Not Public* with a reason of *Unconfirmed*, *Location-Country Level*, *Unconfirmed*, *Location-State Level*, or *Unconfirmed*, *Location-County Level*.

- **Date of 1 Jan 1900:** eBird allows observers to build life lists, country lists etc. by submitting lists for 1 Jan 1900. Submissions from this exact date are automatically treated as *Not Public* with the reason *Checklist-List Building*. In the rare event that a legitimate historical entry comes from 1 Jan 1900, reviewers can override this designation. Note also that reviewers should mark list building efforts from other dates in the same way, but this is a manual, not automated, process (see Checklist-level Review Reasons below).

- **Distance Too Long:** eBird automatically marks some checklists *Not Public* with a reason *Checklist-Distance Too Long* when 1) a High Seas (Region Code = XX) checklist exceeds 100 miles in distance; or 2) any non-High Seas checklist exceeds 50 miles (80.47 km). Note that when the observer changes the mileage, this does not trigger any change in the status of

the checklist—only a reviewer can reverse a checklist that was marked *Not Public* with the *Checklist-Distance Too Long* reason. This is because we want reviewers to check the logic of observers here and to ensure they are not dishonestly reducing mileage.

- **User-hidden Checklists:** if an observer hides a checklist under *Checklist Tools*, it will mark the entire checklist *Not Public* and remove it from all forms of eBird output (the submission might be visible on the Top 100, but it will have no location associated with it). If the observer later unhides the record, and it contains a rarity for your area, you will then need to review the entire checklist for accuracy.

- **"Blacklisted" Users:** some observers violate eBird terms of use or otherwise do not comply with the eBird Code of Conduct. If observers are placed on eBird Probation (see eBird Probation below) all submissions appear as *Observer-Suppressed*. These blacklisted observers are still able to share checklists, but should not do so, since this review reason will carry over to observations from the non-blacklisted observer. This is not the responsibility of the reviewer to correct, but this should be explained to the users involved if checklists are being shared from a blacklisted account.

Quick Review

Quick Review can be selected from the *Quick Review* tab at the top of the browser and also can be accessed from a direct link: https://review.ebird.org/admin/qr.htm. Our *Quick Review* webinar walked through the new tool and explained a bit more about the rationale behind its design and plans for the future. We encourage all reviewers to watch this video.

Advantages of Quick Review
This alternative way to review records (released March 2020) is meant to complement the traditional review pages. We find *Quick Review* to be the easiest way to stay on top of records with documentation through quick periodic check-ins. *Note that you can always access Quick Review for any record via the link on the Observation page (i.e.,* **History** *link).* The main advantages of *Quick Review* include:

- **Easier review** through design optimized for modern browsers, including mobile phones, and for easy media viewing. A subset of common review reasons are provided.
- **Shared checklists** appear as a single review item, so that a single review action applies to all, including emailing which is CCed to all participants on the checklist by default
- **Prioritizing of records with documentation**, since those are cases where observers have invested some effort in providing documentation and we feel that these deserve higher priority; this also means the decisions are easier to make.
- **Option to Defer** when you send an email for more information.
- **Custom email templates** are tailored to match specific review reasons. These are a huge advantage over the generic email from the traditional review processes and give observers more useful information to correct their data. Reviewers are encouraged to add a brief clarifying note to any email and a target box indicates exactly where to do this.

When Not to use Quick Review

The traditional *Review Queue* remains the best place to deal with certain other types of issues. The traditional queue can be easily accessed with one click on the date (goes to checklist page for Checklist-level review) or review history link, which goes to *History* page where other review actions (e.g., Sensitive or Exotic) can be made. These scenarios are best dealt with in the traditional Review pages:

- Records without documentation (which do not appear in Quick Review at all)
- Checklist-level review
- Multiple similar records at once (e.g., hundreds of independent records of a known rarity)
- Review of records as a Sensitive Species (using *Species-Sensitive Species* reason) or Exotic species (using *Species-Introduced/Exotic*)
- Records that you wish to keep in the queue indefinitely using the reason *Species-Rereview Requested* (this reason is not available through Quick Review)
- When you wish to filter or sort records by specific attributes

Overview of the Quick Review Page

Review Decisions and Reasons in Quick Review

The review reasons available in *Quick Review* are a streamlined list relevant for records with documentation. Please see Appendix A for a full description of review reasons.

Each review reason includes a custom email template and all have an option to a custom text block to provide the observer with more information. We recommend reading these emails before sending; opening the email will display it, but it won't be sent until you hit *Send*. ***We strongly recommend adding a short note in the box provided to personalize your emails***. Setting these off with boldface and italics helps make sure the observer does not miss this text.

You always have the option to send or not send the email, but this must be designated when the first box pops up and allows you to set your reason; just check or uncheck the *Send Email* box. If you choose to send an email, the review actions will be finalized when the email is sent. Note that Shared checklists will have all participants on the checklist CCed y default; you can uncheck those who you don't wish to email.

Email templates for Accept

- **Accept:** Checking *Send email* will also send a thank you note to the observer. Please use this for any particularly well-documented record or just to say thanks to anyone or mention something interesting about a record you are accepting. This injects some great positivity into the process!

Email templates for Unconfirm *and* Defer

- **Documentation Inadequate-Count:** This email asks the observer for more documentation on a high count and explains why it is important, and links to our article on counting birds.
- **Documentation Inadequate-Species:** This email asks the observer for more documentation on a rare record, explains why it is important, and links to our article on documenting rare birds.
- **Media-ID questioned:** This email is specifically for records that include correctly identified media mixed with incorrectly identified media. This could be a drag-and-drop error or misidentification. The email explains to fix this using Change Species. *NOTE: This email will appear unfinished if you do not add text in the target box.*
- **Species-Misidentified:** This email explains that a species has been misidentified and gives instructions for how to make the correction using Change Species. *NOTE: This email will appear unfinished if you do not add text in the target box, hopefully including the correct species and some additional helpful ID notes.*
- **Species-Taxonomic Issue:** This email explains that the issue with the record is more from confusion over the selected name or recent taxonomic revision and suggests how to make this change. Please read more about this reason in Appendix A and understand how to use it correctly. *NOTE: This email will appear unfinished if you do not add text in the target box, hopefully explaining the issue briefly.*

As with all records with a *Deferred* status, if you want to keep Quick Review records in your queue indefinitely, immediately mark *Unconfirmed* with a reason of *Species-Rereview Requested*.

Several other reasons in Quick Review (*BRC-Rejected*, *Observer-Error*) are rarely used and have a generic template under *Unconfirm* that is similar to the one used in traditional review but without a request for more documentation. These email templates need you to fill in some information about the problem, if you use them.

Reviewing Shared Checklists

If you review a checklist and it is subsequently shared with other observers, those review decisions will carry over to the new observers as well. However, if those observers then adjust the species count or location and that change exceeds the filter, you will need to re-review that record. If an observer shares the checklist before you review it, then you must review each copy of the list independently.

Other Reviewing Options

Reviewing from an eBird Checklist

When you're logged in to eBird, **you can review any eBird checklist in your assignment region.** Here's an example of a public checklist (https://ebird.org/checklist/S45355741):

As shown above, review options on public eBird checklists appear as flag icons. If you don't see the icons, you are not logged in, are looking at a checklist from outside your review assignment area, or you do not have review privileges properly enabled.

Note: when you are logged in as a reviewer, a checklist from your assigned region viewed on eBird will include ALL species reported by the observer, including those already deemed *Unconfirmed*. Sensitive Species will also be visible only to you and the checklist owner(s) and will be clearly marked; Sensitive Species will not be visible to the general public.

Review Media

As an eBird reviewer, one of your major roles is to ensure all photos are correctly identified. Even if an Observation is otherwise correct, a single misidentified photo in an Observation means that Observation should be treated as *Unconfirmed*. It may be helpful to add a reviewer for your region to focus solely on media issues. In November 2015 we added the ability to drag-and-drop photos and audio recordings directly in eBird checklists via the Macaulay Library. This process automatically assigns the photo metadata including the species of the bird, count, date, location, and more, and archives the photo as a digital specimen akin to a museum specimen. You may find misidentified photos when browsing records in your region, but your *Review Queue* will also include misidentified photos found by others.

Who are "Media Reviewers"?
Media reviewers include all regional editors and all eBirders that have submitted 25 or more complete checklists in the previous year. Media Reviewers have the ability to flag incorrect media, as described below. Regional Editors are not limited to Media Review in their assigned region (i.e., local reviewers are global Media Reviewers). Media Reviewers who are not also regional editors do NOT have other review privileges. They cannot access the *Review Queue*, see review *History*, review individual records on public checklists, etc.

How does Media Review work?
If a Media Reviewer finds a misidentified photo, sound, or video while browsing eBird, clicking on that photo will give them the option to "Report" it with additional details. It is helpful to refer to specific media asset from the checklist (possibly including the Macaulay Library link). The *Offensive or inappropriate content* option is intended only for vulgar, rude, or otherwise inappropriate content, not misidentifications or photos of non-birds.

When media are flagged, they appear with the status *Rereview* and reason *Species-Media ID Questioned*. Remember that records could have been flagged for *Rereview* for another reason. Always check the *History* on such records to see why it was flagged and make sure to check the Media reviewer's comments.

How should I review incorrectly identified photos?

If any photo is not correct, the observer should be contacted and asked to fix it. The record should be considered *Unconfirmed* until it is corrected. It is always nice to include some relevant field marks or resources when you contact the observer and to try to refer to the specific photo(s) that need fixing. Please also steer them to the Change Species article to correct the media.

In **Quick Review**, using the *Unconfirm*, *Species-Misidentified* reason provides an email format that gives all the relevant information on *Change Specie*s and is by far the best and most efficient way to email observers about these types of issues.

Be aware that when photos are reidentified and moved between species, often the observers need to change the count as well. For example, if two Laughing Gulls were reported, but one image showed a Franklin's Gull, then the Laughing Gull count should probably be reduced to one. Remember also that when observers use *Change Species* to move media, the status will change to *Rereview*, ensuring that you will see the record again so you can check that the correct changes were made. However, if the observer deletes photos, they will have to contact you in order for the record to be *Rereviewed*.

Why do some media not have a **Report** *flag*?

Any piece of media that appears on an eBird checklist, and has a Macaulay Library link, has been uploaded via the normal eBird upload process. However, please note that it remains possible to have "embedded" media that displays media from other websites (e.g., Flickr, Facebook, Picasa, iNaturalist) in eBird checklists and these do not have the *Report* button. While these can be useful for verification of a record, we do not consider this a best practice for eBird, since these links can be easily lost or broken through changes by the third-party website. Please

encourage users to upload directly to eBird whenever possible, but please do accept such records when the photo confirms the identification. Also, please note that when using Media Search tools, including Illustrated Checklist galleries, some media (especially audio and video) will be delivered from the master Macaulay Library archive and these are not (yet) associated with eBird checklists. To report an error on these, email Matt Medler (mdm2@cornell.edu).

Change Species

Change Species makes it easy for observers to revise an entire record, with all associated metadata and media, to a new species. When an eBirder uses *Change Species* for an entire observation, any previous review decisions are preserved in *History*, but the record is rerun through the filters as though for the first time. Thus, if a record considered *Unconfirmed* is revised using *Change Species* and the new taxon it is changed to is not flagged, then it will be treated as *Accepted* and *Unreviewed* since it will not have been flagged by the filter.

How are species changes indicated in review history?

A reason of *Species-Identification Changed* will also appear in *History* along with an entry in *Reviewer Notes* that says something like "Taxon changed from semsan to litsti". The alphanumeric codes after "from" and "to" refer to the previous and current taxon of the record, respectively. The common names corresponding to these codes can be found by downloading the eBird taxonomy or by pasting the species code to the end of a species page (e.g., for "litsi" enter https://ebird.org/species/litsti). In this example, the taxon was changed from Semipalmated Sandpiper ("semsan", *Calidris pusilla*) to Little Stint ("litsti", *Calidris minuta*).

We use the eBird code in this case because 1) they are more constant, regardless of changes in taxonomy or nomenclature; 2) they do not require translation to the Reviewer's language preference, which would not be possible here.

Will species changes always cause a record to resurface for review?

Sometimes an observer needs to delete a photo or use *Change Species* to move a single photo to the correct species. For records that are *Unconfirmed*, using *Change Species* to move media to or from a given species will trigger either record for *Rereview* if the observation had been marked *Unconfirmed*. Thus, moving a photo from American Coot to American Wigeon will not trigger *Rereview* if neither record has been marked *Unconfirmed*. But if the reviewer marked the coot *Unconfirmed*, because it had a photo showing a wigeon, the American Coot record will be flagged for rereview once the media are moved so the reviewer can check this. Note that deleting a single piece of media **will not** change the overall record's review status and will not cause it to resurface in the queue, so observers must notify the reviewer once such actions have been taken; see also the note at the end of the above Rereview Status section.

Common Sources of Checklist Errors

Not all incorrect records are due to observer unfamiliarity with birds. To properly respond to flagged checklists, it is often important to understand the ways errors can be introduced into a checklist.

Submissions from eBird Mobile

Many observers now submit their eBird checklists directly from their smartphone. Although this process has been carefully vetted and usually works smoothly, please be alert for errors that could have occurred from the eBird Mobile data-entry system. If you spot something, email us at ebird@cornell.edu immediately.

It can be possible to accidentally report a species (though usually not a "rare" species) on a list by inadvertently bumping or tapping the screen. Please give birders the benefit of the doubt that some entries may be simple typos.

You can identify mobile submissions by viewing the eBird checklist online, which always has an entry under the *Checklist Comments* that reads *Submitted from eBird Mobile* and includes the version; knowing the version is important to finding bugs.

Submissions from bulk data uploads

Although most submissions to eBird come via the eBird Mobile or the online web application, it is possible to upload hundreds or even thousands of records via specially formatted spreadsheets. Because **data entry errors in bulk uploads are easily missed**, it is particularly important that you understand the bulk upload process and make observers aware of records that seem questionable.

Bulk data uploads are rare, but when they occur you are sure to notice large pulses of historical data appearing in the queue. This can create difficulties for reviewers: in addition to the high volume of new review records, you may find that many of these records have broad-scale location information, estimated dates, imprecise counts, and no effort information. On rare occasion, a formatting error can cause more serious data-quality issues.

When you spot a "batch" of imported records, it is important to understand the following:

- **Data entry errors are particularly likely with bulk uploads.** A single transposed line could result in 65 individuals of a rare species and only 1 individual of the expected species (rather than the reverse).
- **Bulk uploads do not have a data validation system that the observer sees**. Unlike mobile or web entry, where the observer is asked to document unusual reports prior to checklist submission, the bulk upload tool provides no feedback to the observer when a record exceeds the filter.
- **Commercial software may have outdated taxonomy.** Observers should be encouraged to update their taxonomy before uploading to eBird!
- **Be cautious with accepting records simply because you trust that observer**, since any record could be a typo, especially with bulk uploads. Even the most skilled and diligent observers may create such errors without knowing it!

Fixing bulk data upload issues

A special email may be necessary when a large number of errors come in a single upload. The following process is one that some reviewers have found helpful: First, use *Search* to query for

the records that need review. Second, copy and paste the records from the Review Queue directly into Excel or a similar spreadsheet program (it may be necessary to copy the data first into a text file and then paste into Excel—but this usually works). Then send the observer the Excel file with comments on why the records are unusual. This provides the observer a chance to see the records that were identified as possible errors, and hopefully they will want to correct any errors you have helped to identify. Once the observer has verified the accuracy of the records, you can proceed with review as normal.

Upload errors can be corrected in the original file (assuming the original file is still available) and then re-uploaded as a new bulk data import session. The entire initial batch of erroneous bulk data can then be deleted using the "Delete Import" option under "Manage Imported Data" in My eBird.

Also, if an upload from a commercial product seems to be creating problems, please let eBird Central know ASAP.

Search Observations

The *Search* tool can be used to locate records of rare and unusual birds that you wish to put back through the review process, or simply to explore the database. You must enter enough search criteria to limit the search results, otherwise you'll receive a note encouraging you to add additional search criteria. When you click the *Search* tab, the *Search for Observations* screen displays with a list of criteria on which to base your database query.

Additional Notes when Searching Records

Note that at least one of the following fields is needed for a search: submission ID, location name, specific taxa, or User ID. Additional notes about specific fields below:

Sub Review Decision: Please be careful with this field, since it defaults to *Public*. Any checklist marked *Not Public* will be excluded unless you change this to *Any decision*.

Review Decision: Selecting either *Accepted* or *Unconfirmed* will return reviewed and unreviewed records (i.e., those that have undergone the review process AND those that were automatically assigned a decision by the system but have not been reviewed by a regional editor)

Species: If a species has subspecies groups, you must enter those groups as well to return all records. For example, to search for all Green-winged Teal you have to enter Green-winged Teal AND its subspecies groups: Green-winged Teal (Eurasian), Green-winged Teal (American), and Green-winged Teal (intergrade).

Searching All Records: Because checklist and observation-level review are treated separately, to get ALL records you must choose *Any decision* on both *Sub Review decision* and *Review decision*.

Using eBird's Explore Data Tools to Find Records for Review

eBird's Explore pages provide rich resources to identify interesting outlier records. The Review Tools have limitations. For instance, it is not easy to find all inland records of Common Eiders in New England, USA, for large counties that touch the coast. This can be easily addressed using eBird Range Maps, which are another entry point for review.

Point Maps: Using [Species Maps](#) to map individual observations can identify geographical outliers, or records that seem out of place. For example, coastal birds plotted inland or terrestrial species plotted offshore. There are also similar-looking species that overlap in their distributions, providing challenges to the casual observer but not flagged by filters. For example, where ranges overlap for Black-capped and Carolina chickadees in the eastern US, reviewers might have to look at records on the Species Maps to ensure that no points are way out of each species' typical range. Species Maps may be the only efficient way to correct such errors, since the regional filters may not be able to catch them. Click on points in the Species Map to obtain the checklist link and review directly from there. To find reports outside of the expected date range, use the Date drop-down in the menu bar to limit which points are shown.

Summary tables for regions and hotspots. For example: https://ebird.org/region/USFWS_14 These display when a species was first seen, most recently seen, and its high count for either the current year or all years (default). To review the records just click the date from this page (or almost anywhere in eBird) to get the checklist review page.

Rare Bird Alerts for your review region will send email notifications (hourly or daily) with checklist links that you can use for review. Since these reports are being watched by others,

quick review is always welcome. This is a very useful way to keep up with incoming records and to be promptly notified of rarities submitted.

Sensitive Species

In November 2017 eBird added a new Sensitive Species process. Certain species at risk from human exploitation are automatically tagged as Sensitive, which hides those records from eBird output. These records still must be reviewed and accepted by eBird reviewers, but since they are Sensitive we expect that observers will not share these records publicly. eBird reviewers can also mark specific records as Sensitive (see reason *Species-Sensitive* in Appendix A; in the future this process will be integrated with the automated process). See more, including the list of species treated as Sensitive, in our Sensitive Species article.

Feedback welcomed

Thanks for participating in eBird and for reviewing records for your region. We appreciate your expertise in helping us keep the data to the highest standards. Without your help, eBird would not be possible! If these instructions are unclear in any way, we want to hear from you so that we can improve them.

Thank you for your time and effort!

Team eBird
Marshall Iliff (mji26@cornell.edu), Chris Wood (chris.wood@cornell.edu), Jenna Curtis (jenna.curtis@cornell.edu), and Ian Davies (id99@cornell.edu)

Part II: eBird Filters

Your Filter Assignment

You can view the eBird filters for your region by clicking the *Filters* tab at the top of the Review Tools page or by accessing this link: https://ebird.org/admin/filterList.htm. Any filter in the first page, *Your Filters,* can be edited by you. Click the *All Filters* button at the top-right of the page to scroll or search the entire global list of filters (you cannot edit these). The column headers can be used to sort the list of filters and the *Find a Filter* box allows you to quickly search for a specific filter.

Permissions to edit filters are set up separately in our system. In general, all reviewers should have access to edit the filters in their assigned regions, but some teams divide responsibilities in different ways (e.g., one person reviewing, the other editing filters) so this is not always true.

Get in touch with eBird Central if you need edit access for any specific filter (please send the link to that filter).

What if I can't see any filters?
Please also check the *Filters* tab at the top right of the page; you should see the filters that you have permissions to edit in your review area. If you do not see the right filters there, please let us know. It is a separate process to set these up, so there could be an error in either place.

If you still do not see any records, please contact us, as there may have been an error in setting up your Review Assignment.

Filter Basics

Filters determine what records are sent to the Review Queue. Unusual records get "flagged" when filter limits are exceeded due to a species reported out-of-range, out-of-season, or in atypically high numbers.

Filters also control what the observer sees on their data entry checklist. The eBird checklist interface has two states:

- *Expected* species - every species with a filter limit set at a 1 or higher for that date
- *Rare* species - every species with a filter set to zero for that date.

When an observer initiates a checklist on eBird Mobile or the eBird website, the checklist will automatically display the expected species based on filter values for that location and date. *Rare* species are by default not displayed, but observers can access them by entering common names or quick entry codes into the species box. Any species without a filter must be manually added to the list by the observer.

Filters Should:
- Represent a reasonable maximum daily count for that species at a specific site within the filter area on a given date
- Reflect normal seasonal fluctuations in abundance as accurately as possible (in other words, filters for migratory species should not be the same value year-round)
- Be "living documents"; inspected regularly (at least once per year), and adjusted as necessary
- Be your best estimates – they don't need to be perfect, just do your best
- Be data informed – Use the bar charts and high counts tools to help find the right limits

Filters Should Not:
- Be set to the species' all-time record high count *(remember, filters should represent a typical maximum count that could be obtained in a single day of birding at a specific site. Regional record high counts are unlikely to be typical)*
- Be so conservative that they regularly flag acceptable counts
- Be so loose that they miss major numerical typos or mis-entered counts
- Be outdated (see below)

Signs of outdated filters:
- filter limits of 10,000 or 100,000 for many species
- filter limits that start or end on the 1st of the month
- filter limits that do not reflect scaled migration periods (for example: most migratory species go from zero to a low number, then reach a peak, then drop to a low number again, and then reach zero again)

Filter Examples

A basic example: 1-4 Northern Shrikes are usually seen in a single day in January in Ontario. However, 5 individuals pushes the limits of what is credible in a single day's birding at a single site without peer review or documentation. Therefore, the filter for Northern Shrike in Ontario should be set at 4 individuals for January. All reports of 5 or more Northern Shrikes in January will then be flagged for review in eBird.

Species with high abundance but patchy distribution: For birds that occur in large numbers but few locations within the filter area, such as waterfowl, continue to set the filter at the highest number you would expect to find in the area during a day's birding. For example: if up to 10,000 Redheads can typically be found in a handful of lakes, but *any* report of more than 10,000 might be questionable, then set the Redhead filter to 10,000 for the entire region – even if the 10,000 Redheads are concentrated in only a few bodies of water.

Expected species that need careful consideration: Sometimes you still want to review records of expected but commonly mis-reported species (i.e., species with high error rates like Northern Goshawk or Common Raven). You may consider setting the filter artificially low to try and catch errors. A good compromise is to set the filter limit at 1, ensuring that the species appears on the default checklist for species entry, but if anyone reports more than one, the record will be reviewed.

Editing a Filter

If you have privileges to edit a filter, it will appear on the *Filters* page in the Review Tools. When you click on the blue filter name, you will see a page that looks like this:

Each filter set displays the regions it is currently applied to. Clicking here will show you those regions, their names, and codes.

Change the name of the filter set. *Please follow our formatting policies when naming filters.*

Each filter set has a description. Older filters may be blank, recent filters may have data automatically added. Click <u>View/Edit</u> to add comments about who worked on the filter and when.

Click to leave editing and return to *Filters* page

Any filter set that is applied to at least one region is labeled "Active"; if it is not yet applied to a region it is "Not Active".

This is the total number of species with filters in this set, with other non-species taxa (subspecies, hybrids, intergrades, slashes, etc.) in parentheses

Add Species will create a new filter for any taxon in the eBird Taxonomy.

Save: This button is activated (turns blue) only when changes have been made. **Be sure to click Save when you are done editing a filter!**

Revert: Clear unsaved changes and return to the last saved version. This button is active only when changes have been made but not yet saved. You cannot revert to a previous version once current changes are saved.

Copy to Filter… copies the names and filter limits of any selected species or subspecies to any other filters you have privileges to edit.

Delete will delete all selected species. *Use with care!* Once a species is deleted, all reports will be flagged for review as they are submitted or if you click "Run".

Check the boxes next to one or more species to select them for copying, deleting, etc.

Copy: Duplicate the entire filter. *Please see notes on copying filters*

Run: Pass all existing data through the current filter. This button will be grayed out (inactive) if the filter is unchanged since the last Run or if a Run is in process and not yet completed.

This box allows you to quickly find and view only a single species' filter limits. Typing a species will also show all the subspecies on your filter. You can also use this to view all species with (for example) "warbler" in the name at once, which is sometimes helpful.

Additional Notes on the Filter Editing Page:

Naming filters: Accurate filter names are essential for our filter editing during the taxonomy update process. Filter names are also displayed publicly in eBird Mobile. Any editor can rename filters, but we do request that you retain the "parent region" with the structure "Colombia--", "Manitoba--", or "New Jersey--". Contact us if you would have questions before renaming filters.

Regions: It is very important for you to double-check to ensure that the filter is properly assigned to regions. If you spot an error, let eBird Central know.

Copying Filters: *Copy* is useful for duplicating filters. For example: if the current filter is applied to two counties, and you'd like to give each county its own filter, you can create a copy of the existing filter and rename both the original and the new one to indicate their new specific counties. After copying a filter, edit each as needed and provide eBird Central with links to the filters along with the county or state codes (such as TX-101) they should be applied to. You can find these codes in the region page URL or in the "regions" link for existing filters. If you make a copy that you don't need, please rename it "delete" and we'll delete these periodically.

Running and Rerunning Data

This is one of the best tools in a filter editor's arsenal to process data and create the most accurate filters. Click *Run* to pass existing records through the filter, see what records are flagged, make corrections to the filter, and then repeat this process.

What happens when you "Rerun" a filter?

You will receive an email notification once the run is complete, along with statistics from the data re-run (i.e., # of records added or removed). By checking records from the review region, you can then adjust the filters as needed and again run the data to remove or add more records. The *Run* button will be deactivated while a run is in progress or if the filter has not been edited since the last run. On rare occasion, a backlog of filter reruns can mean that the *Run* button stays grayed out for many hours. Let us know if it stays grayed out for even longer.

Reviewed and *Rereview* records will not be affected by a rerun, but *Deferred* and *Unreviewed* records will be *Accepted* and removed from your *Review Queue* if they do not exceed the new filter limits (be cautious with *Deferred* records for this reason!). Similarly, previously *Accepted, Unreviewed* records that exceed new filter limits will be added to your *Review Queue*.

Editing Species in a Filter

The **Species List** is where most filter editing is done. The filter is completely interactive and most processes should be intuitive. Some controls are to the right of the species name, while the most common ones are within the monthly limits and can be slid back and forth. Here is a guide to your options:
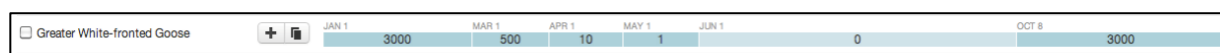
Change or delete count limits - Simply click inside a filter limit to change it. Once you do, you can type a new number or click DELETE. If you change a number to be the same as an adjacent number, eBird will automatically merge the two when saved. Thus, in the following example, if the May 1-June 1 period is changed to 0, then the new summer range will have a zero from May 1-Oct 8. When you delete a limit, it will adopt the count limit to the *left* of the former period. Note that after this happens, you can easily drag the bar to change the date.
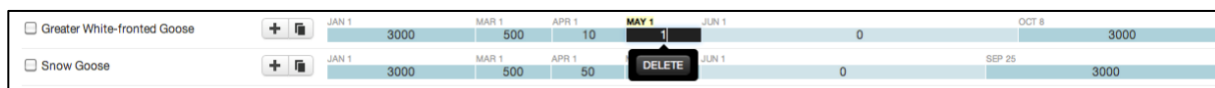
Change date limits – When you hover over the divisions between date ranges, your cursor will change to allow you to drag the vertical dividers to the left or right. In the example below, the spring departure of Greater White-fronted Goose was adjusted. Note that once changes have been made, a blue star appears to the right of the bird's name, indicating that you have changes that need to be saved. Please remember to save periodically and especially before leaving your editing session!
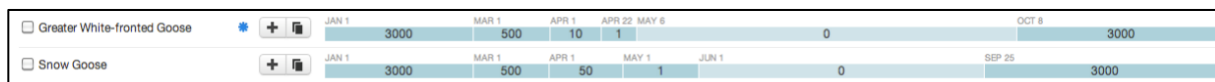
Add date range – Click the + symbol to the right of a bird's name to add a filter period. Note that you only add one date, so the period will be added to the LEFT of the next chronological period. In the example below, a filter period is being added with a beginning date of Oct 1 and a value of 2. The period will extend to (but not include) Oct 8. Note that if a period were added starting Oct 15, the end date for that period would be Dec 31.
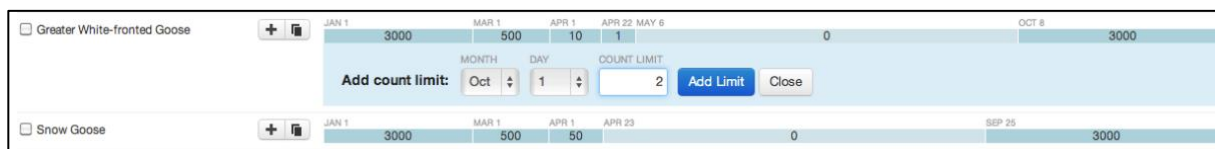
Copy dates and filter limits -- Click the Copy icon to the right of a species name (looks like a pair of stacked pages) to copy the filter values to another species. You will be given two options: 1) *Copy to existing* lets you select one or more species with existing filter limits to replace with these values; or 2) *Copy to new,* which allows you type a species name and create new filter limits for that species. This latter option is especially useful for adding subspecies since they also take their parent species' values. In either case, it can be helpful to copy the values as a starting point and then to edit them afterwards. In the example above, clicking the Copy icon for Snow Goose will apply the limits of 3000, 500, 50, 0, and 3000 to any other species you select.

Review Tools filter tool

Whenever you are reviewing a record in the Review Tools, you have the option to click *Filter*. This will open the filter page for just that species and filter. However, there are some important

pieces to understand about how this works. When you click *Filter* for a species on the filter, it looks like this:

When a species is not on the filter, the *Filter* button still opens a page where you can add it, which is a helpful way to improve your filters. Note the *Add Species* button and checkmark here, which indicates that you arrived at a species that is not on the filter but could be added. It will only be added after you make sure the species is checked and click the blue *Add Species* button.

When *Filter* is clicked from the Review Tools page for a subspecies group (or any taxon that "counts" for a species, including intergrades) it opens a page with the parent species, even though that parent may already be on the filter. Again, if the *Add Species* button appears, it is a candidate for addition to the filter. This page is helpful to make sure the filter values match for both the subspecies and the parent. The below example shows that Black Guillemot (grylle Group) can be added with a single additional click by clicking *Add Species*. If the filter limits needed to be changes, that could be done here as well.

Comparing Filters

This new tool (released June 2019) allows direct comparison of filter limits for any species (or other taxon) between checklist filters within a given region (county, state, country). Editors with permissions to edit two or more active filters can click the hyperlinked name of any species and see all filter limits for that species on filters they have permissions to edit. The reviewer can

copy, edit, and save the filter limits using the same tools described above for filter editing. You will only see filters you have permissions to edit; if you want to compare to adjacent regions, please ask your regional coordinator or eBird Central about expanding your filter editing privileges.

When you click the species name you will be taken to a page showing all filter limits for species within the parent region.

If you are looking at a county filter, and you click a species, you'll get the filter limits for that species within the parent state/province/district. If you are looking at a state/province/district filter, and you click the species, you'll get all the filters within that country. Similarly, if you have Arbitrary Polygons, these will be displayed for the "parent region", which is determined by the region code at the beginning of the polygon's name (not the filter name). You can check the name of your polygons by clicking the *Regions* link; if the name does not begin with a region code and it is not behaving as expected, we will have to rename the polygon at eBird Central.

Additional tips when comparing filters:

- The **Filter** box can be useful if you have logical filter names and only want to work on a certain region at a given time. Because filters are arranged alphabetically, this tool is most useful if similar filters share similar names. Contact us for help renaming filters to make sure that they cluster together in useful ways.
- Try adjusting your browser zoom to a level that works best for you. Note that the page title (e.g., "Alabama Snow Goose - Anser caerulescens Filter Comparison") may not appear in full at higher zoom levels, but this depends also on your screen size.
- It is not possible to delete a species from a filter on this interface, although you can easily set the count limit to zero. To delete a species, just click the filter name (which is a hyperlink), open the filter, make the deletion, save, and then you can use your "browser back" button to return to the filter comparison page.

Comparing filters for rarities

We clearly indicate filters that don't contain a species with the phrase "[NOT ON FILTER]". Copy and paste limits from an existing filter to quickly add the species to the filter that previously did not have the species.

eBird Central Filter Processes

We have a few automated processes that we run regularly. These are:

Filter sync: This process can be run manually by eBird staff. It is most useful when expanding a filter to a new region or refining a filter that has not had good attention from an editor previously. Filter sync will adjust a given filter by:

- Adding any species or hybrid to the list (with year-round limit of 0) that has *Accepted* records in eBird from the region but is not already on the filter
- Removing any species and any of its daughter taxa (e.g., subspecies groups) that do not have at least one *Accepted* record for the region. We do not automatically add subspecies groups with accepted records, so reviewers must add these manually.

Subspecies Sync: If a subspecies group (ISSF), intergrade, or subspecific form is on a filter, we always require that the parent species is also on the filter. This is in part because some observers choose *Hide Subspecies* on their checklists, so we have to ensure that they can see all species for the region. This automatic process runs once a day and automatically adds parent species to the filter, but excludes Rock Pigeon and Muscovy Duck because feral (i.e., domestic) taxa for these species are a special case.

Species and Hybrid Addition: When new species or hybrids are accepted for a region, they are automatically added to the filter on a weekly basis. Some observers do not understand how to use *Add Species* (web) or *Search entire taxonomy* (Mobile), so having these rarities available helps them enter the species if they have seen it; editors should obviously increase the counts if these taxa should be added as a regular occurring form. We run this about once a week and we exclude Rock Pigeon and Muscovy Duck from this process.

If any species is added to a filter that seems like it should not have been, please first check the filter and accepted records for your region. Review any records that need it and then delete the species from the filter. If you notice any other issues with these processes please let us know.

Kiosk Filters

In addition to state, county, and other regional filters, some regions in the U.S. and Canada may be governed by filters developed specifically for a certain refuge or park that has purchased an eBird TrailTracker (or eBird kiosk). These use a customized filter for the specific park and sometimes are initially developed by park or refuge personnel. As an editor for the area, you should be able to review these filters as well. If you cannot, please get in touch. Please note that records submitted from these kiosks are not used in public eBird data.

Non-species Taxa on eBird Filters

The use of non-species taxa (subspecies, slashes, spuhs, hybrids, intergrades, domestics, forms, etc.) on eBird filters is one of the more complex aspects of filter creation and maintenance. We have formal recommendations for inclusion of non-species taxa on eBird filters in the United States and Canada (see Appendix B), but the general philosophy applies globally, and these examples should guide filter standards elsewhere in the world.

For the U.S. and Canada, there is a companion spreadsheet (*Filter taxa recommendations_USA and Canada.xlsx*) that gives formal recommendations for all potential non-species taxa north of Mexico. This spreadsheet categorizes all eBird non-species taxa in the three categories described below in the ISSF (subspecies group) example. In addition to providing recommendations for all non-species taxa this document also provides specific recommendations for all introduced species. US and Canada editors should refer to this document and strive to make your filters consistent with these recommendations.

This file is available here: https://tinyurl.com/eBirdReview

Part III: eBird Policies and miscellania

Be Nice

This should go without saying. We expect civility from reviewers and eBirders. Reviewing records is not simply a matter of quietly going through and reviewing records. Our strongest eBird reviewers take time to build relationships with our users and help to improve their birding skills and eBirding knowledge. You will become one of the primary points of contact between eBird and our user community. Please do what you can to encourage users in a supportive manner and help build the eBird community. People make mistakes. We encourage you to contact and assist them. If you continually treat records as *Unconfirmed* without letting people know, they are unlikely to learn, will keep making the same mistakes, and this will ultimately take more of your time. Be tactful when sharing information about an observer's reputation, reporting history, or identification for a species record. We have very high expectations for reviewers to be professional and polite. Reviewers who do not treat users with respect will have their review privileges removed.

We expect the same from eBirders—if you believe a user is not treating you professionally or with respect, please document the instance by saving those emails and send them to one of the eBird staff members. If we are not able to improve the situation, we may set that user's data to personal-only (eBird Probation, see below). This is always a last resort and we have found that in almost all cases, we can remedy the situation in some other way. Threats of any kind from eBird users are not tolerated. If you receive a threat of any kind, notify eBird staff immediately. See the eBird Review Code of Conduct for more detail.

Respectful Correspondence

You will be corresponding with observers of all skill levels. Since skeptical inquiry about bird sightings can offend some people, please do your best to keep your inquiries respectful and tactful. Our automated emails are usually well-received and are a time-saver in the review process, but feel free to use all, some, or none of it in the email you send to eBirders. Often it is helpful to explain exactly why the species has raised questions. *Quick Review* has specific places to add this text and it is encouraged that you do so.

It is not appropriate to contact people whose email addresses you accessed from eBird to sell anything (birding tours, books, Aunt Mary's awesome cabin that she rents, etc.). Contacting observers for that reason violates our privacy policy. You may include personal websites, business websites, etc. as part of your email signature or eBird profile, but overt marketing to eBird users is inappropriate.

Novice eBirders and GBBC

Please note that eBird is open and welcoming to new birders and we do encourage birders to use eBird even while they are still learning. Our hope is that these birders will report cautiously, acknowledge uncertainty when it exists, and interact positively with the review process. Whenever an eBirder is encountered who does not understand basic elements of eBird reporting—plotting precise locations, understanding of complete checklists, etc.—please steer

them to the free [eBird Essentials Course](#). We plan to continue to develop better support for this community in the coming years, including more training and more opportunities to track personal observations in eBird but to not have those used for public data. Please be patient with new users and please share your knowledge when you can—this is how we all learn.

The Great Backyard Bird Count, which occurs annually on Friday-Monday across the third weekend in February, is a global count effort that tends to engage lots of novice users. Most of these new users submit via the GBBC portal (https://gbbc.birdcount.org/); remember that these records can be removed from your *Review Queue* using the *Filter* option and selecting *Hide Records from* and *Great Backyard Bird Count*. This can be helpful in regions with high GBBC participation where you want to ignore these records or save them for later.

Timeliness

We consider punctual review to be important and urge you to review your records at least once a week, if not daily. *Quick Review* makes this particularly easy. If you are unable to review records once-a-week on average, please consider adding a person to your review team to help out and get in touch with eBird Central to add that person. Records that are not *Accepted* will be excluded from our bird occurrence summaries if review is not timely. eBird is bringing birding into the information age and several of our tools, and many of those we are currently developing, depend on the ability to get bird information quickly, or even in real time. There are exceptions, such as eBird Alerts that do provide near real-time lists of all records reported to eBird. If the species is flagged, it will be noted as *Unconfirmed* on Alerts. If you review it and treat it as *Unconfirmed*, it will be removed from *all* eBird output. If the record is *Deferred*, it will remain on the Alerts (which include records up to 7 days old); this can be a useful way to keep interesting records in view so that others can try to document them.

We also understand that real life may occasionally get in the way and the world (even the bird world) will not stop spinning on its axis if your review list backs up a bit. We expect eBird users to understand this and be patient with review of their records. If you work as a team, please consider having other reviewers cover you while you are away. If not, don't stress about it! It may be worth alerting the local birding community that eBird reviews will be on hold until you get back. Please suggest other people who could help with the review process if needed.

Transparency

The eBird review process is not necessarily fully transparent to new users. There is no easy way to see which records of theirs have been treated as *Unconfirmed*, and no way for them to see the reasons or comments for the review. However, we do ask that you keep your comments professional and relevant!

Some eBird users watch certain eBird output tools (e.g., Alerts) to see whether their records have been accepted. Other users may watch the point maps to see if their record appears, and flagged records will only appear after being *Accepted*. Whenever possible we encourage you to correspond honestly with users to explain why their record won't be shown, but that it will always be accessible in their personal records. We find most users to be receptive to this and understanding of the scientific process, the need for convincing documentation of rarities, and the critical role of data quality review.

Should reviewers review their own records?

When you work as a team with other reviewers we strongly encourage you to have others on the team review your own records. However, when there are no other reviewers in your region, reviewers should review their own records. eBird reviewers are regional experts in judging local records and we trust that this review is objective. Therefore, we also trust you to act objectively upon your own records in your region. Such reviews should focus on the documentation you provide (i.e., using *Observer-Experienced* is not good form when reviewing your own records).

Review Teams

In many regions we have more than one reviewer and we hope that a review team develops open channels of communication and agreement on how to share the workload and divide review responsibilities. It is obviously ideal not to contact eBirders multiple times about a given record, so paying attention to who has already been in touch about records (i.e., those marked *Deferred*) is important. Use the Observation Page *History* to keep track of emails to observers and other actions by reviewers. In some cases, you may want to enter into the notes box something like "Rob Fergus is contacting observer" so that other reviewers in your state don't pursue it.

Adding or removing reviewers

We are always willing to add new reviewers for a region. If you have a suggestion of someone to add, please introduce us to the person and provide a link to their profile or one of their checklists in eBird. Please let us know also if you or another reviewer should be removed (and why). Reviewers can only be added or removed by eBird staff, including regional coordinators for some eBird portals.

List of active reviewers

A list of our current reviewers is in Google Docs: http://bit.ly/1CFRUlX. You can view the current editors and their assignment but will be unable to edit this document. Feel free to get in touch with other editors. Please let us know of changes; we update this list about once a month.

eBird Tutors

In some regions, one reviewer will take on the role to help novice birders with their reports. This can include being the point person to follow up with observers about misidentified photos, assisting observers who struggle to provide accurate locations or to follow eBird protocols, or working in a compassionate manner with new birders or new eBirders who are trying to contribute positively to the project. **We strongly endorse review teams that include someone with this focus.** If you do not have an eBird tutor on your team, or if you are not regularly helping newer users yourself, please get in touch and consider adding a passionate eBirder who might be willing to fill this role and help eBird users in your region.

Records Committees

eBird supports the work of regional Bird Records Committees (BRCs). Our process for archiving photos, videos, and audio into posterity should be a great service to any Records Committee. eBird's review processes should be complementary and collaborative with BRCs where possible. We ask that eBird reviewers:

- Share interesting records with BRCs
- Facilitate and, where appropriate, share information on correspondence with the observer
- Defer to the BRC decision in almost all cases, unless there is good reason to do otherwise. This is especially true for controversial records, such as those documented by written description only.

However, it is also of paramount importance that eBird reviewers:

- Review records in a timely manner
- Not delay decisions until BRC review is complete and published

Thus, we recommend that eBird Reviewers make preliminary decisions on records under review by Bird Records Committees. At the time of publication of BRC decisions, eBird reviewer decisions can be rechecked and revised, if needed. Ideally the BRC would assist with this process. Resolving areas of discrepancy can occur when they are discovered or reported.

Therefore, if a well-documented Ross's Gull appears in your area and is well-photographed and seen by hundreds, please don't delay for the BRC decision. Likewise, if a Brown-chested Martin is reported and you believe the photos show a Purple Martin, please don't delay in making that assessment. If you strongly believe a committee has erred in the treatment of a record, we encourage you to promote the re-review of the record by the committee. Write a statement defending how you would treat the record and submit it for consideration by the committee. And if you depart from a committee decision with your eBird review (which we generally do not recommend), please be sure to provide extensive commentary within the record to defend your departure from their decision.

In many cases, a Records Committee should need nothing more than a checklist link in order to review a report with location, date, observer name, description, and photos. Encourage your local Records Committee to archive eBird Checklists by printing them or saving them as a PDF. Bird Records Committees interested in collaborating more closely with eBird can get in touch with eBird Central (i.e., Marshall) for a document that outlines approaches to streamline record review and collaborate with eBird. This approach has been used in the USA in Massachusetts for many years now and greatly streamlines the process; other states have been increasingly adopting it as well.

Note that BRC decisions on exotic species are addressed in the following section; those decisions should be followed and should define species treated as *Naturalized*. eBird also has a *Provisional* category, which is shared by some but not all BRCs; obviously eBird editors will need to judge these for themselves in cases where the BRC does not assess records in this way.

Exotic and Captive Species

Exotic species

Note that eBird plans to release a new process for designating and reviewing exotic species in 2020. The Exotic species policy through 2019 is now moved to Appendix C which will be revised when the new policy is released. This section applies to Exotic species for 2020 onwards.

eBird review should be based on species identification and documentation; records that are clearly of escapees, with no sign of wild breeding or establishment, can be marked *Unconfirmed* with reason *Species-Introduced/Exotic* (available in traditional review tools only). Please use this only for species that we expect to have no role on regional lists now or in the future; these will be treated as *Escapee* records in eBird's 2020 Exotics revision. For species that are in the process of becoming established in a region, we recommend accepting (if local status or documentation warrants it); these will be treated as *Provisional* species n eBird's 2020 Exotics revision.

Exotic and escapee species are important to birders and existing Bird Records Committees and list-recording bodies (e.g., American Birding Association) each have standards for how exotic species are counted on regional lists. With exotic populations on the rise globally, it is critical that eBirders embrace the reporting of exotic species so that solid scientific data can be collected on their occurrence, patterns of establishment, and possible effects on the environment and other species.

Captive species or zoo reports

Reports of captive birds from zoos, wildlife parks, or waterfowl collections are not appropriate for eBird, which is intended to collect information on free-flying birds. Similarly, some species live in a semi-wild state that return nightly to yards, barns, or lodges (e.g., certain semi-captive trumpeters at South American lodges). Mute Swans (often pinioned) are sometimes temporarily released on lakes during the summer and then recaptured for winter. As with birds in zoos, these birds represent captive individuals, should be invalidated using the reason *Observer-Error* and include comments that these are captive birds or a checklist of caged birds from a zoo. The eBirder should be asked to remove the species from their list and not to report them in the future (it is OK for the observer to add mention of these birds in *Checklist Comments*). The former reason *Species-Introduced/Exotic* is not ever appropriate for such records and if those reviews are encountered, please correct them by rereviewing as *Observer-Error*.

Wild birds in buildings

Occasionally wild birds end up inside buildings where they may spend the winter. These records should be accepted unless there is strong evidence that the bird did not arrive there on its own. For example, a hummingbird captured (this is usually illegal) and moved inside a greenhouse by a person should be *Unconfirmed* with reason *Observer-Error*, since the bird essentially becomes a captive (as with zoo birds). If, however, the hummingbird appeared inside the greenhouse on its own, the bird can be *Accepted*.

Ship-assisted birds

Ship-assisted birds are birds that travel a significant portion of a voyage over open water on a ship; many Nearctic landbirds have been found in European ports on or near transatlantic ships, for example. Similarly, House Crow is renowned for traveling much of the world on ships and even establishing colonies based on these ship-assisted travels. Though different record-keeping authorities treat ship-assisted birds in different ways, within eBird, please accept these records and clearly indicate in *Reviewer comments* that the record is considered a likely or certain ship-assist. These will be treated as *Provisional* in our upcoming 2020 Exotics Species revision. However, if it is clearly the case that the bird has been restrained on board the ship, it should be marked as *Unconfirmed* using the *Species-Introduced/Exotic* reason.

Dead birds

eBirders occasionally report dead birds (or only feathers) on their eBird checklists, sometimes including photos. eBird is not intended for recording dead birds and in most cases dead birds should not be reported. Inclusion of dead birds on complete checklist introduces biases inconsistent with eBird's focus on surveys of live birds by birdwatchers.

Exceptions can be made for records that are particularly unusual following the rules below.

1. Dead birds should only be entered when they represent *unusual* records. As a general guideline, *unusual* should be considered as no more than 5 records within the last 5 years for a county or county equivalent.
2. Dead birds should be reported from a specific account that is dedicated to historical records or rare records within a region. This account should be opted out of the Top 100. The person entering the report should state who entered the record, when, and the source.
3. Reports of dead birds should use the *Historical* or *Incidental* [protocol](#) and a count of at least 1 (not zero). Answer "No" to the question "Are all species being reported?"
4. Birds should be dead no more than about 48 hours and should not show signs of advanced decomposition (maggots, strong odor, dried or deflated eyes). Be particularly cautious of birds washed up on beaches. In cases where this represents a record for which there are fewer than 3 records for a state or country, we can make exceptions to this providing details are clearly included in the comments in the checklist and the other guidelines are followed.
5. Comments should address the condition of the bird. For detailed guide to estimating time of death in selected wildlife species see [this document](#).

Examples of appropriate dead bird reports include Maine's first Trindade Petrel (https://ebird.org/checklist/S25558221) or the only US record of Gray Nightjar (https://ebird.org/checklist/S21527383).

In cases where the above standards are not followed, we recommend following up with the observer and clarifying this policy. Dead birds reported on complete checklist should be marked *Unconfirmed* with reason *Observer-Error* and a comment reflecting why. **Note:** Currently Macaulay photos can be correctly tagged as "dead" only in the quiz. In the future, we plan to refine this so that photos of dead birds can be correctly tagged whenever found.

eBird Probation

In extreme instances, some eBird users are not a good fit for eBird. This can be because the individual reports rare birds at a rate that strains credulity, because he/she refuses to engage with the review process, or because he/she has shown a pattern of rude or abusive behavior. When an individual begins to cause eBird and the review community more harm than good, we always send a warning letter informing the individual of potential account suspension. If the behavior persists, the individual may be blacklisted, referred to here as "eBird Probation". This process automatically marks these checklists *Not Public* upon submission with reason *Observer-Suppressed* and removes their records from all output. The observer also does not appear in Top100 and his/her records do not appear on Alerts. This can be reversed only by eBird Central and would only apply to future records, not past checklists already marked *Not Public*. These records may appear in search and could be reversed if reviewed by a reviewer, but we do not recommend this. Note that checklists shared from an account on Probation will also be treated as *Not Public* (since review *Histories*) are shared; if two friends bird together and share checklists between them, it is important to have the account that is *Public* keep the checklists and share with the other person.

Intentional falsification does occur; our Additional Documents section refers to our document **Falsification of documentation and how to detect it** (email your contact at eBird Central (e.g., Marshall) to request this document). eBird has a zero-tolerance policy on the intentional falsification of documentation. Every case needs to be dealt with on an individual basis, and some cases (e.g., young children) may be worth rehabilitating. Officially, a single proven instance of falsification of documentation is justifiable grounds for blacklisting. If you request such a case, please do provide documentation that proves the falsification.

Note that eBird Probation is not intended for novice/beginner birders, especially young birders. We believe that eBird can be used and enjoyed by birders of all skill levels; honest mistakes are best addressed with the existing review process. Observers usually learn quickly, especially when given constructive feedback. We try to avoid blacklisting whenever possible.

Trespassing and other illegal activity
eBird reviewers are not the police, and we expect reviewers to review records based on their merits and leave legal issues to law enforcement. If a bird was found illegally or unethically, that should have no bearing on its scientific validity. If a rare species of interest to birders is present in an area that is not open to the public, it is OK to leave that record unreviewed or to temporarily treat it as *Unconfirmed* using the reason *Species-Sensitive Species* until the bird no longer presents a temptation to would-be chasers.

Known Bugs

Inconsistent Status
On rare occasions, the *Status* will be different between the *Review Queue*, Submission view (Checklist view), and Observation view; the Submission view tends to be inaccurate. In these cases, the best resolution is to re-evaluate the record, which will bring everything in sync.

Observations from Not Public checklists in Review Queues
Reviewing a checklist as *Not Public* usually ensures that no observations from that list, even newly submitted ones or edited counts, will appear in the *Review Queue*. However, since observations may be flagged (or reviewed) as *Unconfirmed* prior to marking the checklist *Not Public*, it is still possible that newly-added media or edited comments will make that observation appear in the *Review Queue*. When such records are identified on a checklist marked *Not Public*, they can be easily resolved by marking the checklist *Public* and then *Not Public* again immediately. In cases where the observer sets the checklist to *Not Public* using the *Hide* option, please email the user to ask that he/she click *Unhide* and then *Hide*, which will resolve this. If the observer is unresponsive within a couple days, please email Marshall Iliff (mji26@cornell.edu) for help with this so to remove from your *Review Queue*.

Zero counts
Submissions with a count of 0 (zero) can cause bugs in the *History* view. These should be accepted (a count of zero can always be *Accepted*) which will resolve them.

ADDITIONAL DOCUMENTS

These three additional documents are also important and useful for eBird reviewers.

Falsification of documentation and how to detect it
This PDF document is not public. Please contact us directly to receive this document, which can help in cases of suspected fraud. It provides guidance on how to detect fraudulent photos, audio recordings etc. and gives specific examples of where and when this has occurred and how it was detected.

Hotspot Management in eBird
eBird has a separate team managing eBird hotspots; eBird Reviewers are invited to help with this. The hotspot management process is described in a separate document, which is distributed to all hotspot reviewers. This includes both the review and acceptance of new hotspots and management of existing hotspots. This is available here: https://tinyurl.com/eBirdReview

Filter taxa recommendations
A set of .xlsx documents provide recommendations for non-species taxa to include on filters in the US and Canada and as continental or nine simplified regional versions. This document also provides official Introduced/Exotic species recommendations for the US and Canada. US and Canada reviewers should strive to conform with these guidelines on your filters. Reviewers outside of those countries may refer to it for guidance. We would welcome volunteers willing to compile similar documents for other continents or regions. This is also available here: https://tinyurl.com/eBirdReview

APPENDIX A – Review Reasons

Review reasons are an incredibly important part of the eBird review process. Since any review decision may be reconsidered in the future, applying an accurate review reason helps future researchers to understand why a record was treated in a certain way. Furthermore, there is a fair amount of eBird code that does or could in the future apply certain logic to the records. For example, records marked *Documentation Inadequate* currently reappear for review if documentation is augmented, and records marked *Species-Taxonomic Issue* are periodically updated by eBird staff.

The below review reasons are broken into two categories: Checklist-level review reasons, which are accessible from the Submission page, and Observation-level review reasons, which are accessible only when the Checklist is *Public* and can be applied from the *Review Queue*, *Checklist* page, *History* page, as well as *Quick Review*.

It is very important that reviewers understand the review reasons and use them correctly.

Checklist-level review reasons

Checklist-level review reasons only apply to marking a checklist *Not Public*; marking a checklist as *Public* does not require a reason and is an indication that the checklist has been reviewed and the location, date, effort, and other metrics are OK. The most common review reasons below are underlined and preceded by an asterisk (*). Reasons listed at the end and marked with a dagger (†) are applied by automated review processes and cannot be used by eBird reviewers.

Checklist-Date Imprecise: Use this when an observer submits records from a correct location, but uses a date that is clearly incorrect. Some users submit lists spanning multiple days. eBird does not accept multi-day lists and it is best to make these checklists *Not Public* using this reason, even if they are otherwise correct. Obvious list-building efforts should be invalidated as *Checklist-List Building* and incorrectly plotted locations should be made *Not Public* using one of the *Location* review reasons below.

*Checklist-Distance Too Long: Mainland checklists of 80.5 km (50.0 miles) or longer, or High Seas checklists (https://ebird.org/region/XX) of 160.9 km (100.0 miles) or longer, are automatically tagged as *Checklist-Distance Too Long*. Reviewers can override this in rare cases, and if observers correct a typo (e.g., change 50 miles to 5.0 miles) then the checklist can be marked *Public* by a reviewer; editing the distance does not reverse the automatic tagging.

One goal of review is to ensure that correctly identified records are plotted reasonably accurately, so that display on a map will not misrepresent the species' range. In general, we believe that most checklists of 8 km (5 miles) or less should be accepted by reviewers and most checklists of 25 km (15 miles) or more should probably be marked *Checklist-Distance Too Long*, especially if they span multiple habitats. Reviewers must use their best judgment in all cases to not be overly restrictive, but to also steer observers towards shorter and more precise lists.

Checklist-Duplicate: Identical duplicate submissions (from the same observer's account) should be made *Not Public* with this reason. Observers sometimes cause this by hitting submit twice rapidly. Often the observer may not know about this, so an email may be appreciated. This SHOULD NOT be used for duplicate lists from different observers, since these are "checklist shares" and are dealt with properly (as a single checklist) in the eBird database. Please note also that this is most important for effort-based complete checklists; some checklists that use Incidental or Historical protocol and report from the same location should not considered duplicates if different media assets or different notes are associated with the records (e.g., certain checklists uploaded from the Internet Bird Collection (IBC) in Feb 2020).

Some observers share with group accounts (e.g., "Lake County Bird Club" or "September Shorebird Survey") to aggregate data for an organization or project; this is acceptable and these also should NOT be considered duplicate submissions. Furthermore, some observers may maintain a duplicate account for aggregating specific lists (such as "no playback" or "no heard birds" or "green birding" where they share their own lists). Observers maintaining such accounts should do so using the checklist sharing feature. However, these "group accounts" do need to set their preferences to not appear in the Top 100. In the future, we hope to develop a better way for observers to maintain such lists, but in the meantime this is acceptable and not a reason for invalidation as a duplicate list.

Checklist-Error: This reason is to be used for miscellaneous issues with the checklist that are not covered by the other review reasons (one example would be a checklist reporting entirely captive birds from a zoo). This reason should almost always be accompanied by review notes explaining why the checklist was considered *Not Public*.

*Checklist-List Building: It is common for observers to create a life list or a state list by plotting a location or selecting a random point, picking a random date, and submitting a full list of what they've seen over the course of a lifetime or a trip to a given country or state. These do not represent serious attempts to submit data worthy of a scientific database, so these should be made *Not Public*. Records from these often are easily caught by our filters, and anytime these are identified the entire list should be marked *Not Public* with this reason. Note that we do formally recommend that users submit such lists using the date of 1 Jan 1900 (see the Enter your pre-eBird life list article) and records from this date are automatically tagged as *Checklist-List Building* and marked *Not Public*. If you encounter users entering different dates for such lists, please steer them to this article.

Checklist-Multi-party: eBird is a system for collecting single-party checklists. If two or more observers go birding independently, these birding efforts should be submitted separately. If they are not, it is appropriate to make the list *Not Public* using this reason if the observer is unwilling to correct his or her list. Christmas Bird Count "sector" data is sometimes submitted this way as an aggregation from multiple independent parties, and this is the appropriate way to address those checklists.

Checklist-Protocol Error: This reason is to be used when eBirders use protocols incorrectly. These could include custom protocols, like atlases or specialized surveys, or misuse of Traveling Count or Stationary count protocols. Also, Nocturnal flight call counts should use the special

protocol since this makes assumptions about counts and detectability that do not affect eBird output. Please ask observers to change their Nocturnal Flight Call count submissions to this protocol; if they do not, marking them *Not Public* using this reason may be appropriate. Changing protocol does not automatically remove this tag, so this requires a reviewer.

*Location-Issue: This review reason is to be used for any case where the observer has badly misplotted the location or has selected the incorrect location. Ideally, the reviewer would email the observer in such cases to inform him or her about the error. Note that use of country, state/province, or county-level locations (from "Submit for an entire country, state, county, or city") will automatically treat checklists as *Not Public* using the appropriate review reason. For any *Location* review reason—including both reviewer-tagged checklists and automatically-tagged checklists—a correction of the location by the user (either a location move or selection of a different location) will remove this checklist-level flag. We assume in such cases that the observer has made the appropriate correction and if not, these will need to be located again; we do not give reviewer notification in such cases.

†Location-County Level: We automatically tag all submissions that come in at the county level (via the "Submit for an entire country, state, county, or city" option) as *Unconfirmed, Location-County Level*. In other words, reviewers will not find these records unless you search for them. For eBird, submissions at broad levels like county, state, and country have relatively little value, and do not meet our minimum requirements for location specificity and should not appear on the point maps. If you find a record in your review queue that clearly represents a county-level submission (users can still plot a point anywhere and call it "Kern County, California"), please mark it *Not Public* using *Location-Issue*. Of course, if a rarity is reported, you may want to follow up to find out if it was correct and, if so, encourage the user to plot it precisely. For all location-based errors, we encourage you to try to educate our users about how to plot records more precisely and make their data more useful. Note also that, as with *Location-Issue*, when an observer revises the location to a specific location it will remove the *Not Public* flag.

†Location-Country Level: We automatically tag all submissions that come in at the country level (via the "Submit for an entire country, state, county, or city" option) as *Unconfirmed, Location-Country Level*. In other words, reviewers will not find these records unless you search for them. See *Location-County Level* above for more information (the same rules apply, and Country level records are obviously even less precise than County level submissions).

†Location-State Level: We automatically tag all submissions that come in at the state or provincial level (via the "Submit for an entire city, county, state, or country" option) as *Unconfirmed, Location-State Level*. In other words, reviewers will not find these records unless you search for them. See *Location-County Level* above for more information (the same rules apply, and State level records are obviously even less precise than County level submissions).

†Observer-Suppressed: Used with *Unconfirmed*. You do not have an option to set this yourself, but this is the eBird "black list" (which we refer to as *Personal-only* or *[eBird Probation](#)*). Occasional incorrigible observers cause eBird more harm than good, either through unwillingness to engage in the review process, unwillingness to improve their eBirding habits or lack of interest in improving their birding skills, or other problems they cause. We can set

specific users to have their data automatically marked as *Unconfirmed*, but we only do this in extreme cases where there is a clear paper trail to document why we are taking this action. Please request it rarely and only with good reason (e.g., intentional falsification of documentation)!

†**User Hidden:** This cannot be set by reviewers, but it may appear in the *History* of a record. This is set when a user selects "Hide this checklist from eBird output" which makes the checklist *Not Public* and this action cannot be reversed by a reviewer, only by the user (see below).

†**User Unhidden:** This cannot be set by reviewers, but it may appear in the *History* of a record. This is set when a user selects "Show this checklist from eBird output" for a checklist that had been previously hidden. This selection makes the checklist *Public* and this action cannot be set by a reviewer, only by the user (see above).

Observation-level Review Reasons

A review reason is required for all eBird review decisions, although some older decisions may not have a review decision logged. The review decisions have evolved some over time, so some older review reasons still may appear in *History*. When these are encountered, it is good practice to rereview the record with a more current review reason since it is always the most recent review reason that is the official, final decision.

Each review reason is specific to the review decision (*Accepted* or *Unconfirmed*). Occasional older records may show reasons that do not match the decision; again, when these are found please re-review the record.

Note that in the Review Tools we discuss records as *Accepted* or *Unconfirmed*, while in eBird (e.g., eBird Alerts) we typically use *Confirmed* or *Unconfirmed*. The most commonly used reasons are underlined and marked with an asterisk (*) below.

Review Reasons with ACCEPT

In *Quick Review*, all of the *Accept* options have the option to send a *Thank you* email, which also can be used to make comments to improve the submission by adding additional notes, metadata, additional photos, or a more specific designation (e.g., change a spuh to a species or a species to a subspecies group). Please use this whenever possible—Thank yous are always appreciated!

Documentation-Photo/Video/Audio: Media should be independently identifiable (i.e., if the species can't be identified, use another reason). Media need not be in Macaulay Library, but ideally would be archived there for posterity; please encourage the observer to do so.
- *Quick review: This reason prepopulated for* Accept *on records with media.*

Documentation-Field Notes: Written description supports the claimed identification. Please encourage observer to add the description to the *Species Details* on the checklist so they are permanently archived. If you receive details not in the checklist itself, add these to the Reviewer Notes in the review tools.
- *Quick review: This reason prepopulated for* Accept *on records with Species Details.*

Observer-Experienced: We encourage you to accept based on documentation and recommend the use of this reason only when no better reason applies. However, reliable eBirders who routinely provide responses and consistently document rarities well can reasonably be held to a lower standard for low-level rarities or birds known to be present. For highly significant records, it is important to not use this reason and to hold all observers to a similar standard.

Record-Not exceptional: In general, filters should not flag records like this. Whenever you use this reason, please first consider whether changing the filter and rerunning the data is a better option. However, eBird filters are never perfect and should be seen as the first line of defense to identify unusual records; in cases where they don't do this well, but you don't wish to change the filter, please use this reason.
- *Examples:* 1) date or count barely outside filter limits; 2) record from expected region within your area that may have a more conservative filter setting overall (e.g., species regular at one site year-round, but set to zero year-round to "catch" records away from that site); 3) species status has changed over time; 4) observer used an expected subspecies that you don't want on your filter, such as House Finch (Common) or Great Egret (Eurasian).

Species-Known to be at location: Useful for known, well-documented rarities or rare birds that occur at one or two known spots but that are considered rarities in the general region covered by the filter. When using this option, please do make sure that one or more similar records are accompanied by documentation, since this reason essentially relies on other documentation to establish confidence in the record. Since *Record-Not exceptional* also could apply in these cases, please try to use *Species-Known to be at location* for cases where a specific site gives confidence while *Record-Not exceptional* is more for cases where a specific region of known occurrence gives confidence in the record.
- *Examples:* 1) eBirder reports a Richard's Pipit—the only pipit present—that was widely seen and well-photographed by others, but the report itself does not contain the necessary detail; 2) Purple Sandpiper is flagged but occurs regularly at one site with a long jetty. Reports from here during the expected season could be accepted using this reason.

BRC-Accepted: This is to be used only when documentation archived with a Bird Records Committee has resulted in the acceptance of the record. If eBird has independently verifiable documentation, using the appropriate above reason is preferable. In general, we ask that our reviewers follow the decisions of state Bird Records Committees (i.e., records accepted by BRCs should be *Accepted* in eBird, and vice versa). Please see Records Committees section above.

Review Reasons with UNCONFIRM

Species-Misidentified: Use only in cases where you are certain that a mistake was made (photo or description, or accounting of events, indicates another species). It is often useful to add a comment to your review decision saying how you know this. Please correspond with the observer to let them know how to fix this to prevent them from making the same mistake again; Quick Review has an ideal template for notifying observers of misidentifications.
- ***Quick Review template:*** *This reason prepopulated for* Unconfirm *on records with media. Quick Review defaults to an email template for* Species-Misidentified*.*

Documentation Inadequate-Species: We encourage decisions based on documentation provided. Use this when the species is rare and inadequately documented. Importantly, records tagged with this reason resurface for review when the observer bolsters the documentation.

- *Quick Review template: Prepopulated for* Unconfirm *on records with filter limit = 0 and no media. Quick Review defaults to email template* Documentation Inadequate-Species*.*

Documentation Inadequate-Count: Use this when the species might not need documentation, but the count does. If the observer provides no documentation, or if the documentation is not convincing, please use this reason. Importantly, records tagged using this reason will resurface for review if and when the observer bolsters the documentation.

- *Quick Review template: Prepopulated for* Unconfirm *on records with filter limit > 1 and no media. Quick Review defaults to email template* Documentation Inadequate-Count*.*

Media-ID Questioned: Use this when an observer has a mix of correct and incorrect media in their observation. This generally means that the species observation is acceptable (although the count may need adjustment) but the observer has accidentally (drag-and-drop error) or intentionally (identification error) added incorrect photos to a record. Please advise the observer of the error; if they use *Change Species* to correct the images, the record will be set to *Rereview*. However, if they simply delete the incorrect images the record may not get rereviewed unless you or the observer send the link. This reason only available for photo records in *Defer* and *Unconfirm*.

This reason is also used by [Media Reviewers](#) to flag a record for review; these always set the status to *Rereview*. Only an eBird Reviewer can make a final decision using this reason. Because there are different workflows to apply this reason (Flag as Misidentified on a checklist or Macaulay image vs. a review in Review Tools), and a different end result (rereview vs. a final decision), this should not create confusion.

Observer-Error: This is a "catch-all" for any additional scenarios not covered by the other review reasons. This should be rarely used, most often when the checklist has multiple issues that indicate systematic problems with the birds reported (but not checklist-level issues). Records decided using this reason will NOT resurface when the observer adds documentation.

Species-Taxonomic Issue: This is to be used specifically for cases where the observer has probably correctly identified the bird but is using an outdated or erroneous name or older taxonomy. **Please be sure only to use this in such instances!** Please always enter the correct name (English or Scientific name) in the reviewer comments and please expect that we may display these comments publicly or change these records for the observer in the future.

- *Examples:* These types of errors can occur as: 1) typos (such as Black-billed Cuckoo-Dove instead of Black-billed Cuckoo; we all make typos!), 2) nomenclatural confusion (such as using White-throated Robin *Irania irania* instead of White-throated Thrush *Turdus assimilis*—understandable because both names have been used for the *Turdus* and this person may have a field guide that uses the former name); 3) genuine taxonomic confusion, such as using Common Snipe *Gallinago gallinago* for New World snipe sightings instead of Wilson's Snipe *Gallinago delicata*, since the latter species was

known by the former names prior to the split. Since scientific nomenclature will be retained by one member of a recently-split species, this is especially confusing for those that use primarily scientific names.

BRC-Rejected: This can be used when a record has been reviewed and decided upon by the Bird Records Committee. This reason is preferable to a *Documentation-Inadequate* decision because it means that a formal submission assessed by a group also did not achieve acceptance. See *Record-Accepted by BRC* above. See also [Records Committees](#) section.

Below is the full suite of review reasons and where they are found. Those with asterisks (*) are in the traditional review tools only (i.e., not available in *Quick Review*) and those with a dagger (†) are applied automatically and cannot be found in drop-down lists.

ACCEPT	UNCONFIRM	OTHER
Documentation-Photo/Video/Audio	Species-Misidentified	†Species-Flagged by filter
Documentation-Field Notes	Documentation-Inadequate	†Species-Identification Changed
Observer-Experienced	Documentation Inadequate-Species	†Email-Thank You
Record-Not exceptional	Documentation Inadequate-Count	†Email-Documentation Requested
Species-Known to be at location	Media-ID questioned	
BRC-Accepted	Observer-Error	
	Species-Taxonomic Issue	
	BRC-Rejected	
	*Species-Rereview requested	
	*Species-Introduced/Exotic	
	*Species-Sensitive Species	

Other Review Reasons

†Email-Documentation Requested: This is automatically set when you click the mail icon and send a request for information from *Unconfirm* or *Defer*; although specific email templates are loaded from *Quick Review*, these are indicated by the companion review reason and not further specified in the email entry. For example, if I mark a record *Unconfirmed*, *Species-Taxonomic Issue*, and send the email from *Quick Review* there will be one *History* line for *Deferred*, *Email-Documentation Requested* and a second entry for *Unconfirmed*, *Species-Taxonomic Issue* that is applied immediately afterwards. If the same email is sent using the same reason from *Deferred* then the *Unconfirmed, Species-Taxonomic issue* entry is applied only after 14-days have elapsed without action by the observer.

Documentation Inadequate: In the current review process, this reason appears less commonly than it did in the past. It was one of the more common reasons and was used for many years before the process made a distinction between records that had inadequate documentation for the species or for the count. Now, this reason is used in the traditional review tools (not available in *Quick Review*) and can be set only by sending an email for more information. This process uses our default email template and asks for more information to document the sighting. Once the email is sent, the record is set to *Deferred* with reason *Documentation Inadequate*. If 14 days pass without the reviewer revisiting the record to make a final decision, then the record is set to *Unconfirmed* with reason *Documentation Inadequate*. If, after sending the email, you are confident of a decision please go ahead and make that final decision at that time (which will apply a final decision instead of treating the record as *Deferred*). If photos are added any *Unconfirmed* record will reappear with *Rereview* and if documentation is added to a record marked *Documentation Inadequate* (including the two more specific reason above) then the record will also appear for *Rereview*.

*Species-Introduced/Exotic: Our Exotic species policy is evolving and we expect this process to be largely automated in early 2020. At this point, we recommend using this reason only for species that you believe are correct or are well-documented, but which are not breeding at all and pertain to one-off escapees. Using this reason will remove them from output, including regional lists, and will apply the *Introduced/Exotic* tag which may be useful soon. Importantly, records marked as *Unconfirmed* using this reason are provided in eBird Basic Dataset downloads, so it is important to use this correctly.

*Species-Sensitive Species: To be used with *Unconfirmed*. Use this only in rare, special cases were the sensitivity to disturbance, capture, or other harm means that the location should be suppressed from eBird. Rarely, this can be used to hide a sighting on private property that is garnering inappropriate attention from birders. Using the correct code is important so that we can change how these records are handled later. See also Sensitive Species above to understand what species are automatically treated as Sensitive in eBird. Ideally, these records would be made public after the immediate threat has passed (i.e., if the species is known to have left the area).

*Species-Rereview requested: This review reason can be set only by those with permissions to review in a given area. It is a system to encourage reviewers to take a second look at a record and we encourage reviewers to always check the *History* of a record treated this way. Feel free to use this to flag records for yourself or other reviewers on your team to look at.

Retired Review Reasons

Occasional review reasons used in older iterations of the Review Tools may appear in *History*. We recommend re-reviewing these records when found to apply an appropriate modern review reason. Get in touch with eBird Central if you need help understanding any of these. The most recently retired reasons (fall 2019) are most likely to be found in the *History* of records; below is a guide to those reasons:

Documentation-Measured: Previously used with *Accept* for records accepted based on in-hand morphometrics; instead of this reason, please use *Documentation-Field Notes* and add relevant comments in *Notes*.

Observer-Experience unknown: Previously used with *Unconfirmed* for records where observer experience seemed to be an issue. Please review based on presence or absence of documentation, not perceptions about observer skill.

Record-In Review by BRC: Previously used with *Accepted* or *Unconfirmed*. We no longer wish for reviewers to await BRC decisions. Please make a preliminary judgment based on your assessment of the evidence; decisions can always be revisited by finding the records in *Search Observations*.

APPENDIX B – Non-Species Taxa on eBird Filters

We divide this list into nine regions from Northwest to Southeast: 1) Alaska; 2) Pacific Northwest (British Columbia, Washington, Oregon); 3) California; 4) Arizona and New Mexico; 5) Interior West (Yukon to Nevada and Saskatchewan to Oklahoma); 6) East (Manitoba to Newfoundland and Oklahoma to Georgia; note that Plains states such as Oklahoma appear in both regions); 7) Texas; 8) Florida; 9) Hawaii.

These are general guidelines that help to provide shortened lists that are regionally more relevant and are available in the master file as well as in regional versions that include only Code A species that occur in the region. These should be considered the formal list of recommendations.

Contact Marshall Iliff (mji26@cornell.edu) with any questions, corrections, or recommendations. Non-species taxa fall into seven categories: ISSF (identifiable sub-specific form, also known as subspecies group), hybrids, intergrades, spuhs, slashes, domestics, and forms. This document and the companion spreadsheet provide recommendations on all of these. Editors always will need to use some judgment on whether to include a category or not; the below rules provide important guidelines. We use "regular" to refer to anything with a limit of 1 or higher on a region's filter for any period. The below rules apply to taxa listed as Code A.

- If only one Code A **ISSF** occurs in the region and the species is regular, the ISSF should appear as well as the species category with the same filter limits as its parent species (except in "richmedia" cases; see below). If multiple ISSFs occur, all should be listed with appropriate filter limits, and the sum of those should at least match the parent species. In rare cases where identification is possible only in certain plumages (see Solitary Sandpiper and Short-billed Dowitcher), we recommend maintaining filter periods for the ISSF, even when there is only one expected taxon; these are detailed in the spreadsheet.
- Include Code A **slashes** when both species are regular in the region.
- Include Code A **spuhs** when two or more component species occur regularly in the region.
- Set the counts for Code A **slash** and **spuh** options to match those of the more common taxon and the seasonality to match that of the species with the more restricted seasonality. If both species are vagrants set at 0, it can still be useful to include the slash or spuh (also set at 0).
- In many cases for **slashes** and **spuhs**, we recommend including the slash or spuh even when one of the species is rare. This encourages conservative and careful reporting. For example, Western Sandpiper is rare in much of the Midwest, while Semipalmated Sandpiper is regular. We still recommend including Semipalmated/Western Sandpiper liberally so that observers are appropriately cautious with uncertain identifications of this species pair.

- Include Code A **hybrids**, **intergrades**, and **forms** when they are regularly reported (annually or nearly so) in your region. Include them with a count of "0" if documentation is always desired.
- Include Code A **domestics** when they occur regularly at at least one site.

Within the US and Canada, our *Filter taxa recommendations* spreadsheets give formal recommendations for all non-species taxa below, including ISSF (subspecies groups), hybrids, intergrades, spuhs, slashes, domestics, and forms; each of these is discussed in more depth below. Please get in touch directly with Marshall Iliff (mji26@cornell.edu) with questions. When clarification is needed, he will summarize for the eBird Regional Editors' discussion group.

Subspecies groups or ISSFs

The eBird/Clements Checklist has unique subspecies groups wherever a named sub-specific taxon (subspecies, or group of subspecies) is distinctive and safely field identifiable (by plumage or voice) or—in rare cases—when genetic work unambiguously shows its distinctiveness. Note that the nomenclature of ISSFs generally uses capitalized parenthetical names for the more distinctive and well-known taxa and generally uses a lower-case subspecific epithet for those that are more subtle, less well-known, and require more caution when reporting. Detailed information on the subspecies groups in eBird, including the component subspecies and their ranges, can always be downloaded for no charge from the Clements/eBird checklist here: http://www.birds.cornell.edu/clementschecklist/download/. We recommend downloading the eBird/Clements Checklist file, which includes all eBird taxa along with all subspecies (and their ranges) from the Clements Checklist. **Important:** *Anytime a subspecies group appears on a filter, the parent taxon should be listed as well. This is essential because some users set their checklists to not show subspecies.*

Subspecies on filters fall into three groups:

Code A – Always include. Multiple subspecies groups occur widely and are easily field separable using visual and/or audio ID characteristics; eBirders should be encouraged to report these to refine temporal and spatial distribution for these taxa. Including such entries is particularly important for species that are likely to be split.

Examples: Brant, Willet, Warbling Vireo, White-breasted Nuthatch, Palm Warbler, Fox Sparrow

Extended example: The Boulder County, Colorado, filters should include entries for: "Fox Sparrow" [the parent taxon]; "Fox Sparrow (Slate-colored)"; and "Fox Sparrow (Red)"; but should not include "Fox Sparrow (Sooty)" and Fox Sparrow (Thick-billed)," which do not occur in the region.

In some cases, multiple subspecies groups occur continentally and are easily separable, although they rarely overlap or overlap only in narrow areas. Even in areas that have little likelihood of occurrence of more than one subspecies (or subspecies group), having the subspecies (or subspecies group) entry available with the same filter limits as the species entry on local filters provides for accurate range maps and educates users on important differences within such species. Including these is most important in overlap areas but recommended continent-wide.

Examples: Great Blue Heron, Downy Woodpecker, White-breasted Nuthatch

Extended example: Great Blue Heron [the parent taxon] and "Great Blue Heron (Blue form)" should be an option on all Canada/U.S. filters, both set with the same filter limits. While there is no reason for Newfoundland filters to include "Great Blue Heron (White form)" because that taxon doesn't occur in the region, most southern Florida filters should include four Great Blue Heron options corresponding with all the taxa possible there: "Great Blue Heron"; "Great Blue Heron (Blue form)"; "Great Blue Heron (White form) "; and "Great Blue Heron (Wurdemann's)". This treatment is necessary in filter regions where both "Great Blue Heron (Blue form)" and "Great Blue Heron (White form)" occur, because a checklist with entries for "Great Blue Heron" and "Great Blue Heron (White form)," but with no entry for "Great Blue Heron (Blue form)" would not allow researchers to determine which records of "Great Blue Heron" are referable to which subspecies, or whether those birds were simply not identified to subspecies. For consistency, we thus recommend Great Blue Heron (Blue form) be used across the United States and Canada.

Finally, we also include some subspecies groups that are split as species by other authorities, specifically the IOC (http://www.worldbirdnames.org/). Since eBird does provide IOC nomenclature as a user selection, having these IOC species listed at the subspecies level allows users to accurately report their birds when their common name preference is set to "English (IOC)". These examples always have a note in the excel sheet indicating that the IOC taxonomy is an important reason for inclusion.

Examples: Sharp-shinned Hawk, Great Horned Owl

Extended example: Sharp-shinned Hawk is split into four species by the IOC and Great Horned Owl is split into two species. There is no eBird taxon that matches the IOC species "Sharp-shinned Hawk." Instead, eBird subspecies groups Sharp-shinned Hawk (Northern) and Sharp-shinned Hawk (Caribbean) comprise the IOC species "Sharp-shinned Hawk". Additional Middle American and South American taxa Sharp-shinned Hawk (White-breasted), Sharp-shinned Hawk (Plain-breasted), and Sharp-shinned Hawk (Rufous-thighed) match the IOC species White-breasted Hawk, Plain-breasted Hawk, and Rufous-thighed Hawk, respectively. For Great Horned Owl, all North American birds represent the eBird subspecies group Great Horned Owl (Great Horned) which matches the IOC species "Great Horned Owl", while South American birds are split as Lesser Horned Owl by the IOC and match the eBird subspecies group "Great Horned Owl (Magellanic)." Matching taxonomy to the IOC can be complicated, but by including these taxa, eBirders will learn more about variation in these species, reduce confusion for those that use IOC taxonomy, and track the occurrence of these distinctive subspecies groups more accurately.

Group A – richmedia. Within group A, we have a subset of taxa encoded as "richmedia" which are very hard-to-identify taxa that are still poorly known. A well-known example is Red Crossbill, which has several groups or Types that have very similar calls and of which distributions and movements are still being worked out. Please do include these on your filters as recommended, but please set them to 0 and require rich media to accept the records.

Code B – Reviewer discretion. In general, we do not recommend using these subspecies groups. However, they may have local relevance so taxa in this group may be included at the discretion of the reviewer. Some of these are obscure, rare, or poorly known, so we leave it to reviewers to monitor whether these options are being used or would be valuable to promote their use in a region.

Examples: Eastern Towhee, Horned Lark

Extended example: Many Georgia and Florida filters could include entries for "Eastern Towhee," "Eastern Towhee (Red-eyed)," and "Eastern Towhee (White-eyed)," but there is no compelling reason for such treatment in Ontario, where only the red-eyed subspecies group occurs. However, filter regions that include "Eastern Towhee (White-eyed)" should certainly also include "Eastern Towhee (Red-eyed)" (see Extended example in Code A, above, for similar treatment). Horned Lark is included here as well, since vagrants from Asia in western Alaska are easily distinguished from the local subspecies, but including Horned Lark taxa continent-wide would be problematic given subtle and overlapping characteristics in the groups.

Code C – Not recommended. Multiple subspecies groups occur globally. Although the North American form may be distinctive, the subspecies ranges are clearly defined and do not overlap, and thus in the case of a future split, these records are easily assignable to either taxon based solely on range. It is not important to include these on the filter unless another form also occurs regularly. These subspecies are usually used in cases of extreme vagrants, and are necessary for that purpose. Both of the below taxa have occurred in Europe, and reports are interesting to track.

Examples: Long-eared Owl (American), Northern Shrike (American)

Extended examples: As far as is known, there are no United States or Canada records of Old World taxa of species such as Boreal Owl and Northern Shrike, so all occurrences of either species safely can be assumed to represent the "American" taxon. Users that do report the expected taxon should have their records validated (using the *Record-Not exceptional* rationale). There are other additional subspecies groups that are very difficult to identify (e.g., Song Sparrow subspecies groups) or poorly known by birders (e.g., Common Yellowthroat subspecies groups); these are also classified as Code C for now. Putting these on eBird checklist filters would result in misuse and would unnecessarily inflate the length and complexity of the data entry for the checklist.

In order of priority, we recommend that editors: 1) always include Code A taxa; 2) include Code B taxa sparingly and primarily in areas where the more range-restricted taxon occurs; and 3) avoid including Code C entries.

For all ISSFs, it is the responsibility of editors to understand (or research) the subspecies groups that are reported and to accept if appropriate. We can provide guidance, so please get in touch with Marshall Iliff (mji26@cornell.edu) with questions.

Hybrids and intergrades
Since any taxon can be added to any eBird checklist using "Add a species," we recommend being conservative with the addition of hybrid and intergrade taxa to filters. Anything that is common enough in a region to be validated without documentation should certainly be listed on the filter (e.g., American Black Duck x Mallard (hybrid) in most of the East). For taxa that are rare enough to be listed at zero, it is at the reviewer's discretion whether it is regular enough that displaying the species in the "rare species" list would be helpful. We recommend incorporating such entries when a taxon is recorded multiple times from a region and/or when it could be readily confused in the field with a local rarity [e.g., Snow x Ross's Goose (hybrid), Glossy x White-faced Ibis (hybrid), or Eastern x Spotted Towhee (hybrid)]. Including the hybrid alongside the rarity will hopefully encourage observers to be careful when reporting either taxon. Isolated single records should not necessarily require adding a hybrid or intergrade to a checklist filter. Note also that many hybrids are difficult enough to identify that they should always be listed as zero on the filter. A number of hybrids in group B are listed as a rarity and these should almost always require rich media for validation.

Spuhs and slashes
Having spuhs and slashes on the likely list prompts eBirders to be conservative and encourages them not to force an identification. In general, for the slashes and spuhs included in Category A, we recommend including the option if both species (for a slash) or two or more species (for a spuh) are listed on your filter with a count of 1 or higher. Even for rarities, it can be useful to give the slash option so that taxa can be reported conservatively when appropriate. For example, Short-billed Dowitcher and Long-billed Dowitcher both occur widely in the US and Canada, but differ regionally in abundance and seasonality. Since distant and silent birds are extremely challenging to identify, and even well-seen birds can be frustratingly difficult, we recommend providing Short-billed/Long-billed Dowitcher anywhere that both species might occur. As with hybrids and intergrades, any taxon can be added to any eBird checklist at any point.

We encourage editors to be liberal in adding spuhs and slashes, but also to be conservative in the number of options to represent a given field problem. For jaegers, instead of the various species-pair options that users can select, we recommend including jaeger sp. on all filters that have more than one species, rather than the more specific slash options. Similarly, Neotropic/Double-crested Cormorant and Great/Double-crested Cormorant both have unique field challenges and also have regions of the country where these are the primary cormorant identification challenge. But identification of distant, similar, or poorly-seen cormorants is a worldwide issue best represented by universal availability of cormorant sp. Users always have the option to add the more specific option if they understand its use and want to add it. (These records should be validated when used appropriately.) This general philosophy is followed in the companion spreadsheet and we urge consistent application of these recommendations across eBird. Most Code B slashes are ones that have narrow contact zones or are rarely an identification issue.

Domestics
Domestics are a part of the regularly occurring avifauna across much of the world, although most are limited to populated areas. We recommend adding these to filters for any region that has a substantial population of domestics; very rarely do these require review. Please do try to make

users aware of how to use these correctly. Domestic taxa are those with phenotypes consistent with the domesticated form, not necessarily birds that are dependent on humans or recently escaped. Thus, Mallard (Domestic type) refers to white, oversized, and/or otherwise unusual Mallards. Mallard (Domestic type) is not intended for wild type birds that are from introduced stock, since it is usually impossible to differentiate released birds from wild birds. **Note:** Since Graylag Goose and Swan Goose interbreed widely in captivity, since few birders understand this, and since trying to parse their ancestry based on appearance is almost futile, we recommend "domestic goose sp." in lieu of Graylag Goose (Domestic type) or Swan Goose (Domestic type). Please be sure to understand eBird policy on Rock Pigeon and Muscovy Duck.

Forms

Forms in eBird might pertain to two other categories in the future since they include both undescribed species and sub-specific forms that are not yet widely accepted.

Undescribed taxa are typically species-level taxa that have yet to be described (e.g., San Pedro Tanager) and are listed with a parenthetical note "undescribed form." Sometimes this category includes taxa that have been formally described, but are not yet accepted as valid. We encourage adding these to any filter where they occur and are likely to be reported.

Others, like "Brant (Gray-bellied)" and "Red-tailed Hawk (Northern)," are probably valid subspecies and are equivalent to our ISSF groups, but these taxa are not currently recognized on the Clements Checklist. Some such examples—like Slate-colored Coot (White-billed) and Slate-colored Coot (Yellow-billed)—might be morphs or subspecies. The many Red Crossbill call types are also forms.

A final class of forms is for taxa for which we have very similar ISSF taxa and where a slash version of those taxa is warranted. White-crowned Sparrow (*nuttalli*) and White-crowned Sparrow (*pugetensis*) are two examples. However, we also have White-crowned Sparrow (Yellow-billed), which refers to these two taxa in combination. We have such taxa for Rock Sandpiper, Crowned Woodnymph, Orange-crowned Warbler, and White-crowned Sparrow, and we recommend using these instead of the more specific subspecies options.

Codes used in Filter taxa recommendations spreadsheets

The latest version of this file and the regional versions are always available here: http://help.ebird.org/customer/en/portal/articles/1822748

Note that this file provides not only recommendations for using non-species taxa on your filters in your regions, but also official policies for the US/Canada on Introduced species. In addition to comments discussing the validation of Exotic species, we also provide a column for Exotic validation region that clarifies the state(s) or regions where the species should be added to filters (if regular enough) and validated (if well-documented). See more on Introduced species policies in our "Review Tool and Filter" document, also available at the above link.

The taxa are color-coded as follows: Exotic species (blue); recommended non-species taxa (green); and not recommended taxa (red).

The abridged file provides Common Name, Code, Comments, Exotic validation region, and the nine regional codes above.

The unabridged (.xlsx) files provides the following Groups that may assist in sorting: Non-species (non-species taxon); Established Exotic (species accepted as established by the American Birding Association); Exotic (exotic species to be tracked in eBird); Exotic/Native (species with exotic and native populations in US/Canada); Exotic/Vagrant (species known as both Exotic species and a vagrant in US and Canada); Reintroduced/Native (Native species for which some populations are reintroduced).

CODE
Code A = Always include. Include on filters wherever this form occurs for subspecies groups and wherever it is a regular field problem for other taxa.
Code A - richmedia = Always include. However, these taxa are an identification frontier and collecting documentation is essential. Filters should be set at zero. Rich media (photos, audio recordings, or video) should be required for acceptance.
Code A - vagrant = Always include. These taxa are vagrants to the US/Canada and these options will be rare.
Code B = Rarely include. These taxa may be of use regionally, but generally should not be used commonly on filters. Before adding these to your filters, please review other options.
Code B - rarity = Rarely include. These taxa are very rare (most are hybrids) and should be used only with caution. All or nearly all should be set at zero and should require rich media if included on filters.
Code C = Never. We do not recommend including these on your filters; observers can add as needed.
Code C - extralimital = Never. These are not needed in the US/Canada because they do not occur in the US/Canada, but are included here because other subspecies occur within the US/Canada and are listed elsewhere in this document.

REGIONS
See third paragraph above for regional definitions. Sorting by the below column will give a prioritized list of regular species, vagrants, and taxa generally not in your region.
1 = regular in region and should be considered on all filters in the region.
vag = Vagrant in region. Should be considered where the species occurs as a vagrant.
x = Unknown or not regular in the region.

Regional non-species taxa **files**
For editors that prefer shorter lists more relevant to their local area, we also provide a region-by-region list of the taxa listed as code A and known from the region. The latest version of these files are always available as PDFs here: https://tinyurl.com/eBirdReview

- Alaska
- California
- Coastal NW
- Arizona/New Mexico
- Interior West
- East
- Texas
- Florida
- Hawaii

APPENDIX C – Exotic Species

Note that eBird plans to release a new process for designating and reviewing exotic species in 2020. Once released, this section will be largely irrelevant and will be revised in future versions of this document.

The discussion below pertains mostly to the United States and Canada, but the general philosophy should be applied globally. We defer to local partners and ornithological groups to establish lists of species that should be Accepted versus those where records of escapees are isolated and should not be considered valid records in the eBird database. Please consult with us if you have specific questions about how to apply these guidelines in your region.

We believe that *it is important and useful for birders to report exotic birds*. For example, eBird provides an extraordinary illustration of the spread of Eurasian Collared-Dove across the United States, and it is a valuable tool for understanding how other exotics expand or contract their ranges. Tricolored Munia is expanding in the Caribbean and Central America and has already reached the United States; Scaly-breasted Munia is breeding in the wild and expanding in California; Rosy-faced Lovebird populations are on the rise in southern Arizona; and Monk Parakeet populations are in constant flux in many cities.

The ABA Checklist Committee has recently used eBird data on Scaly-breasted Munia and Rosy-faced Lovebird (and several other species) to add those species to the accepted list of established exotics in the U.S. and Canada. Importantly, downloadable eBird data (http://ebird.org/ebird/data/download) include records marked as *Unconfirmed* with the reason *Species-Introduced/Exotic*; this is the only case where we provide *Unconfirmed* data in these downloads.

However, a much thornier issue is how to treat records of other escapee species within the eBird review process. We lay out some guidelines below:

1) Be sure to review the identification of exotic species first; if the identification is not acceptable, there is no need to consider the exotic/introduced status!
2) Any exotic population accepted to the state or regional list should be reviewed and validated within eBird just as you would for a native species. Please include it on the filters with appropriate count limits.
3) The following native species have introduced or reintroduced populations that should also be validated wherever they occur: Trumpeter Swan, Mallard, Canada Goose, California Quail, Gambel's Quail, California Condor, Whooping Crane (however, given regional hunting threats we fully support editorial teams that delay validation or tag these as *Unconfirmed*, *Species-Sensitive Species* until we can be confident that the birds themselves are not at risk), Northern Cardinal (e.g., Los Angeles), House Finch.
4) For the following exotic species, which are established or showing expanding populations in North America, should be treated as *Accepted* under the following circumstances:
    a. Anywhere they occur: Mute Swan, Himalayan Snowcock, Rock Pigeon (Feral Pigeon), Gray-headed Swamphen, African Collared-Dove, Eurasian Collared-

Dove, Monk Parakeet, House Crow, Great Tit, European Starling, Common Chaffinch, Eurasian Siskin, European Goldfinch, House Sparrow, Eurasian Tree Sparrow

b. Anywhere they are "established" (intermittent escapees outside areas of establishment should **not** be accepted): Chukar, Ring-necked Pheasant, Gray Partridge

c. The following species, accepted by the ABA or state records committees, are considered established in certain regions: Egyptian Goose, Muscovy Duck (Established Feral), Spotted Dove, Budgerigar, Rosy-faced Lovebird, Red-crowned Parrot, White-winged Parakeet, Nanday Parakeet, Green Parakeet, Eurasian Skylark, Red-whiskered Bulbul, Common Myna, Scaly-breasted Munia

5) In certain "exotic bird regions", we recommend treating a larger slate of species. Formal listings of what species to accept in these regions can be found in our "**Filter taxa recommendations**" documents available here: http://help.ebird.org/customer/portal/articles/1822748. Please encourage birders in your area to report exotic species on all outings, and in those areas they should consider the question "Are you reporting all species" to include both native and non-native species. These regions in particular have a diverse exotic avifauna and the review guidelines are in the above document.

   a. Hawaii
   b. Florida
   c. California
   d. Texas

6) All other examples, including escapee waterfowl, parrots, and songbirds) should be treated as *Unconfirmed* with the reason *Species-Introduced/Exotic*. For example, a Red-lored Parrot in St. Louis, while interesting, should be marked *Unconfirmed* and *Species-Introduced/Exotic* within the eBird Review Tools. If official eBird policy changes regarding an expanding exotic species such that it warrants tracking in eBird, please do search for those records, and accept them. When those populations show signs of increase (or are accepted to the state list) it will be easy to search for all records and change their decision status.

7) There are a few species that have been treated inconsistently by bird records committees (BRCs) as possible escapees, with some committees treating all occurrences as wild, and others treating all occurrences as escapees. For example, as of 2008, Barnacle Goose was treated as wild in Pennsylvania, but as an escapee in adjacent Maryland. Although we support the decisions of BRCs as outlined above, the inconsistent treatment of species such as Barnacle Goose actually obscures the very patterns of occurrence that can be useful for records committees to assess the wild status of these species. The U.S. Barnacle Goose bar chart shows a pattern very similar to that of other migratory geese, mirroring that of Greenland Greater White-fronted Geese. Only by accepting ALL records will patterns become apparent through eBird tools. Thus, for species with "mixed" treatment by BRCs, we recommend erring on the liberal side (i.e., it may be appropriate to depart from the BRC decisions for these records).

In cases where the bird is *known* to have escaped from captivity, or where there is strong circumstantial evidence that the individual was an escapee (unusual behavior, unusual

plumage/molt, etc.) we recommend that the record be marked *Unconfirmed* with the reason *Species-Introduced/Exotic* and with reviewer comments explaining their reasoning. However, in all other cases *regardless of location or time of year*, we recommend that these species be treated as *Accepted*: Barnacle Goose, Pink-footed Goose, White-cheeked Pintail, Garganey, Baikal Teal, Falcated Duck, Black-bellied Whistling-Duck, American Flamingo, Crested Caracara, Harris's Hawk, Monk Parakeet, European Turtle-Dove.

For potentially wild vagrant examples of the above, this is the one case where you should use the code *Accepted* and *Species-Introduced/Exotic* if you believe the record to pertain to an escapee. In effect, this keeps the record in eBird output and also logs your vote that it should be treated differently from wild vagrants. Please be sure to include some written comments explaining your treatment of the record. This will not affect current output, but in the future we expect to build tools that will take this *Species-Introduced/Exotic* coding into account.

Captive species and **Wild birds in buildings,** please see those sections in Part III of the Reviewer Handbook.