Merlin

What happens when everyday people build a bird ID tool?
Yellow-throated Warbler
The “search” for ID help

“small bird with black stripe”
“orange birds”
“ID of sparrow with red crown”
“smoky gray bird with black eyes and black tail”
“large hawk with white tail patch”
“plump small bird with long straight bill”
“black bird with pointy head”
## Key to the Northern Conifers

1. Crowns small, or if large then definitely cone-shaped

2. Crown broadly conical, usually rounded tip, branches not prominent
   - Cedar

2. Crowns have a pointed top, or coarse branching, or both
   - Crowns narrow, often cylindrical, trees frequently grow in swamps
     - Swamp-type black spruce
   - Crowns conical, deciduous, very light toned in fall, usually associated with black spruce
     - Tamarack
   - Crowns narrowly conical, very symmetrical, top pointed, branches less prominent than in white spruce
     - Balsam fir
   - Crowns narrowly conical, top often appears obtuse on photograph (except northern white spruce), branches more prominent than in balsam fir
     - White spruce, black spruce (except swamp type)
   - Crowns irregular, with pointed top, has thinner foliage and smoother texture than spruce and balsam fir
     - Jack pine

1. Crowns large and spreading, not narrowly conical, top often not well defined.

3. Crowns very dense, irregular or broadly conical
   - Individual branches very prominent, crown usually irregular
     - White pine
   - Individual branches rarely very prominent, crown usually conical
     - Eastern hemlock
   - Crowns open, oval (circular in plan view)
     - Red pine

*From Canada Department of Forestry.*
Merlin

• Dynamic Q&A
• Handles “noisy data”
• Gets better with use
20Q in action

Think of something and 20Q will read your mind by asking a few simple questions. The object you think of should be something that most people would know about, but not a proper noun or a specific person, place, or thing.

Click the ? in the upper right corner for help.

Q1. Is it classified as Animal, Vegetable or Mineral?
   Animal, Vegetable, Mineral, Other, Unknown

Suggestions

If you would like some suggestions of what to think about, 20Q recommends the following:

20Q is confused about...
   a sextant, bile (fluid secreted by the liver), a magician, a hyrax (African mammal), a cousin.
Where did you see the bird?
(for example: Sapsucker Woods, Ithaca, NY 14850)
When & Where

<table>
<thead>
<tr>
<th>1 species (+0 other taxa)</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
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<tbody>
<tr>
<td>Flammulated Owl (Otus flammeolus)</td>
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Select the bird's bill length.

The bird's bill is...

- Shorter than the head
- Equal to length of head
- Longer than the head
Click on the belly in the photo.

Look at the diagram above, then click on the belly to show Merlin where the belly is located in the photo at left.
Has Merlin correctly identified your bird?
Check your answers in Progress area to the right. You can click to edit answers.

91% chance it is a Hooded Oriole

Yes | Not yet

Progress

1. When the bird was seen
   June 10, 2011
2. Where the bird was seen
   Vetana Canyon, Tucson, AZ
3. Bird size
   Robin-sized
4. Bird Group
   Songbirds and More
5. Bird Shape
   Blackbirds and Orioles
6. Main Colors
   Yellow and Black
How do novice bird watchers describe birds?
Front-end

Novice Birders
- Size
- Color

Expert Birders
- Shape

Findings
- Bird groups
- Biodiversity
Formative Testing

Confidence Level Using MMB

- Extremely confident: 20%
- Somewhat confident: 41%
- Not at all confident: 31%

Interest in completing another session of MMB

- Extremely interested: 58%
- Somewhat interested: 22%
- Not at all interested: 4%

Usability Testing of Mark My Bird
- In-person think aloud & interview (n=28)
- Web based survey (n = 540)
Unintended Outcomes

“The questions guide the user through a very complete species observation.”

“A great way to learn what is important in reviewing birds descriptions, and how to see a bird-by-sections!”

“FUN!!! Helps me to hone in on each defining characteristic of the bird.”

“Learning how to be more organized when describing characteristics of a bird for identification.”
Summative Questions

Are there changes in...

- Interest in birding
- Confidence in identifying birds
- Changes in behavior related to birding
- Bird identification skills
- Understanding biodiversity
Children could name more Pokémon species than wildlife
What is the extinction of a condor to a child who has never seen a wren? — Robert Pyle

- Dark-eyed Junco
- Harlequin Duck
- Giant Coot
- Undescribed species
- Yellow-headed Blackbird
- Blackburnian Warbler
- Black Skimmer
- Savannah Sparrow
- Sandhill Crane
- Yellow-headed Blackbird
At your fingertips...

Mobile devices  
Classrooms  
Museums  
Butterflies  
Plants...
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