Supplemental file 3: Appendix 1: Methodology

Methodology for quality control

For quality control, each image is assigned to multiple, independent citizen scientists for identification to reach a consensus (i.e. the images are currently classified by independent users up to 11 times, however, the exact number of classifications is not strictly determined and can vary). In addition, a team of experienced participants (citizen scientists who have classified > 3,000 images; hereafter “expert reviewers”) check selected classifications (e.g. species difficult to identify, or images tagged as “needs review”). In our project, images are tagged as “needs review” when a species can easily be mistaken for another species due to similar physical characteristics, or when the subject on the image is not clear due to factors like poor lighting, motion blur, obstruction. The review process of images aims to ensure accurate data classification and allows for additional scrutiny in uncertain cases.

Methodology for time investment analysis

We calculated the total time investment by summing up the “"Seconds to Create” (the duration the participant took for the initial image classification) and “Seconds to Review” (the time taken by the reviewer to verify or confirm the participant's identification). We excluded any images from our analysis if their review time exceeded 45 minutes, thereby, avoiding the inclusion of artificial or erroneous label times. Based on this, we determined the total time investment in hours. Time investment was calculated based on an eight-hour working day, divided by 224 (mean number of working days per annum in Germany, Arbeitstage 2023). The number of labels per user was calculated as the sum of all given labels per user. The

image classification to participant ratio was calculated by dividing the number of classified images (“labels”) by the number of active participants. All statistics were done in *R 3.6.1* (R Core Team 2022).