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Supplementary information

Citizen science in environmental and ecological sciences

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Supplementary Material:

Citizen science in environmental and ecological sciences

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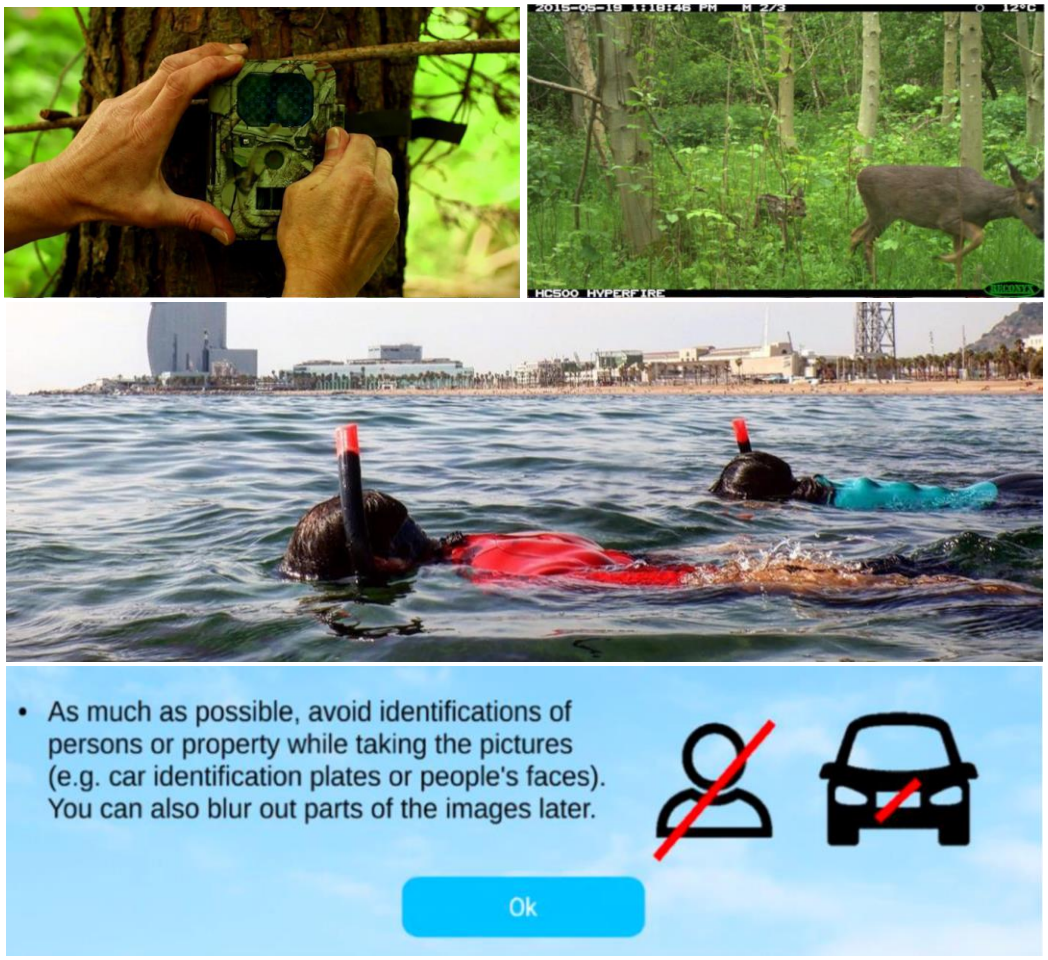
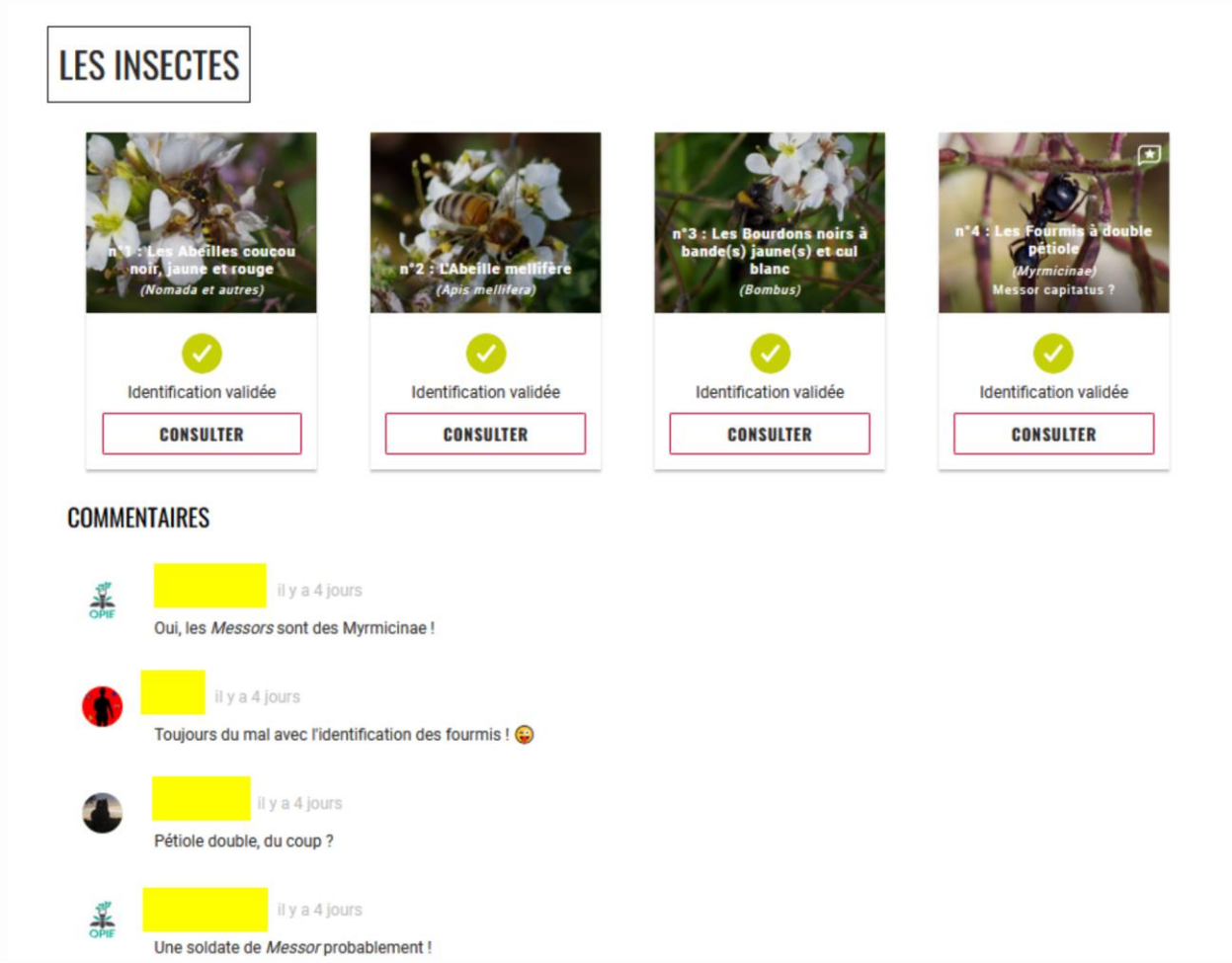
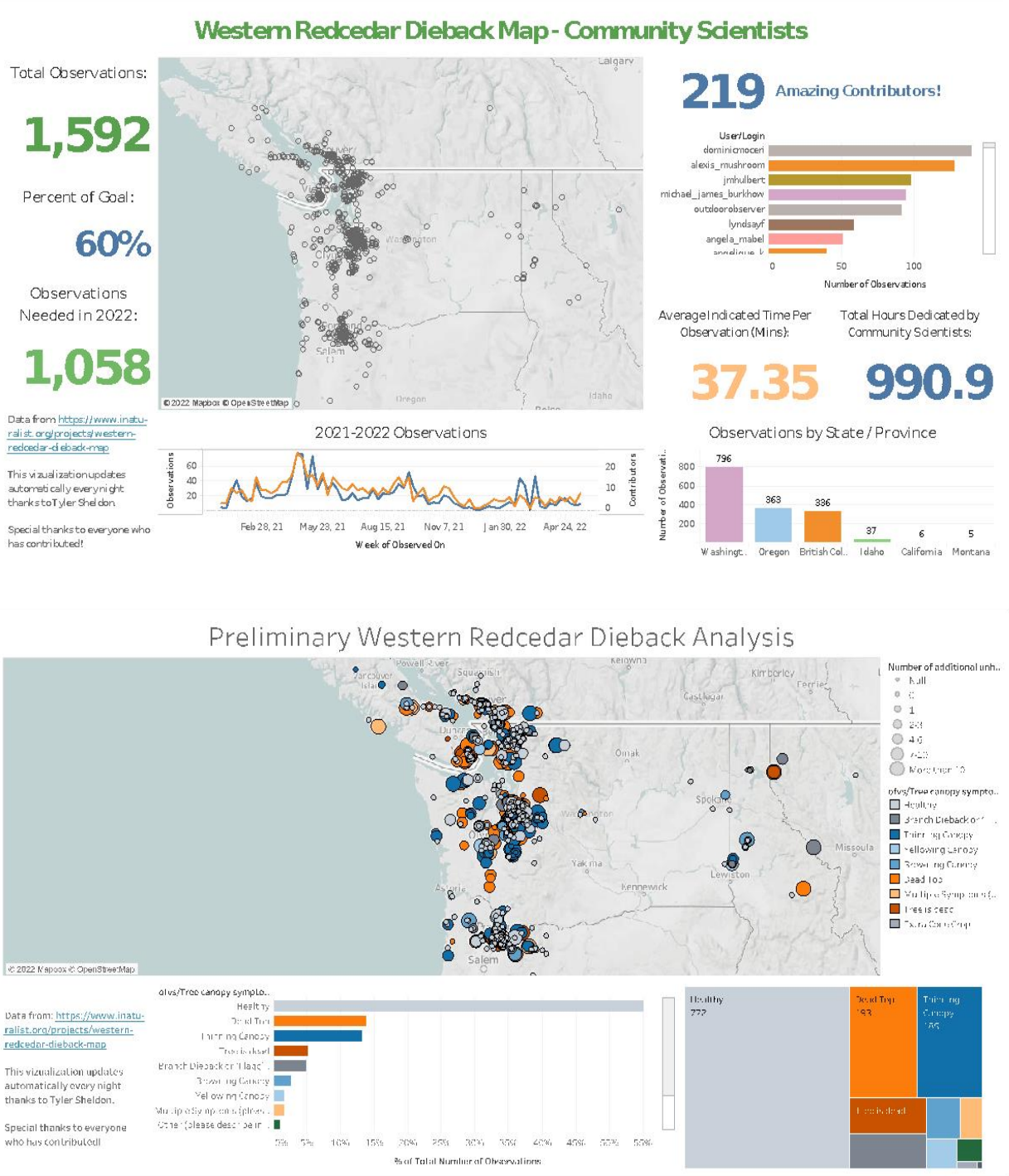
The following figures supplement section 4 Application with tangible illustrations from the five contributory citizen science examples described (MammalWeb, Spipoll, the Participatory Guide of the Marine Species in the Barcelona Metropolitan Area, FotoQuest Go and The Forest Health Watch / Western Redcedar Dieback Map) as well as providing supporting illustrations to BOX 2: Collaborative Creation of Scientific Knowledge – Cientificos de la Basura.



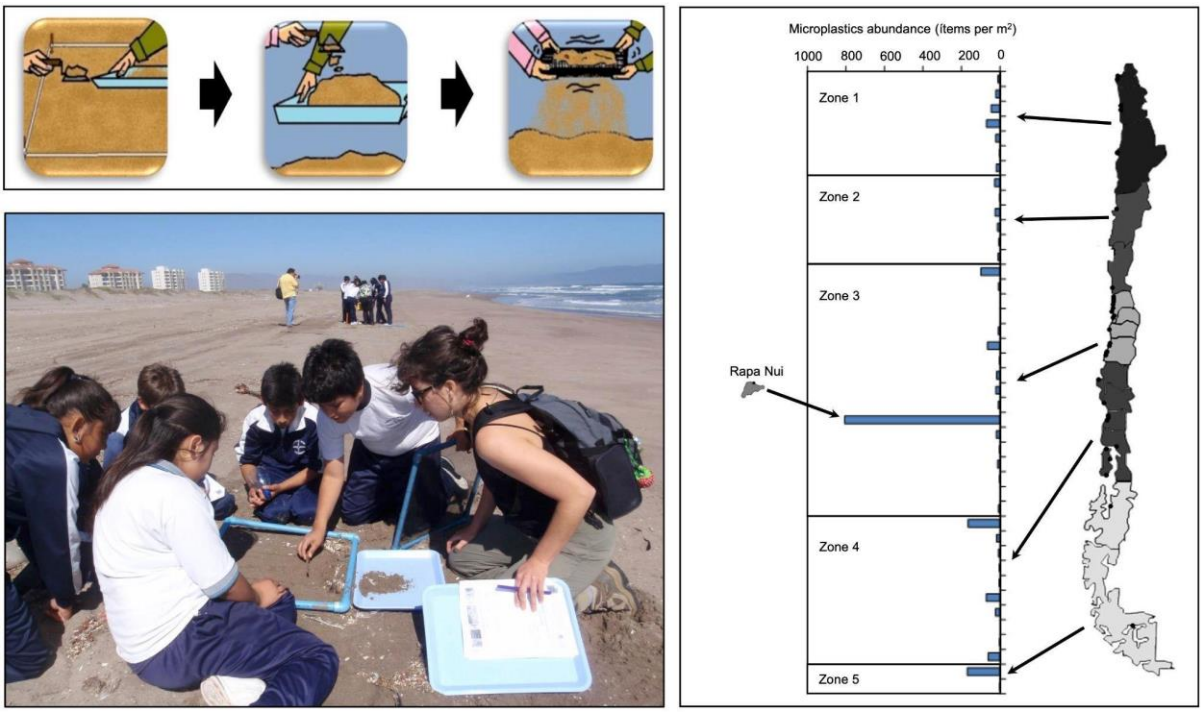
Supplementary Figure 1: **Illustrations from the MammalWeb, Participatory Guide of the Marine Species in Barcelona Area and FotoQuest Go projects.** Top left: MammalWeb participants deploy motion-triggered camera traps to observe wildlife; Top right: Image of wildlife taken by camera serving as a sample for further data processing; Middle: Snorkeling in groups to capture images of biodiversity in urban coastal waters (photo by Anel·lides); Bottom: Screenshot from the FotoQuest Go app guiding the user in considering privacy issues when taking photos for land cover assessment.



Supplementary Figure 2: **Visual sample collection from the Spipoll data sharing platform.** Top: Photos of the pollinators taken by a participant during one session, with the corresponding insect identification. These identifications are validated by other users (green check under the photos); Bottom: comments from other participants on this collection.



Supplementary Figure 3: **Data and information dashboard of WRDM**. Data and information dashboard created from iNaturalist project data, updated daily on https://foresthealth.org/analyses, including, amongst others, total number of observations, observation distribution map, user leaderboard highlighting users with most observations, target number of observations, percent of target reached as well as data analyses visualizations (accessed 19-May-2020).



Supplementary Figure 4: Cientificos de la Basura (“Litter Scientists”) **Sampling scheme** (top left); **On-site sampling effort in teams** (bottom left); **Published results figure** (right). Data on the right adapted with permission from ref 1, ELSEVIER.

Supplementary references

1. Hidalgo-Ruz, V. & Thiel, M. Distribution and abundance of small plastic debris on beaches in the SE Pacific (Chile): A study supported by a citizen science project. Mar. Environ. Res. 87–88, 12–18 (2013).