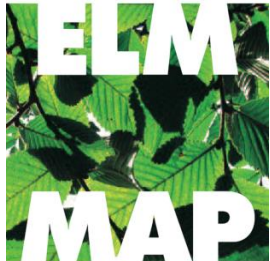# Citizen science: The role of crowdsourcing in digitising museum collections
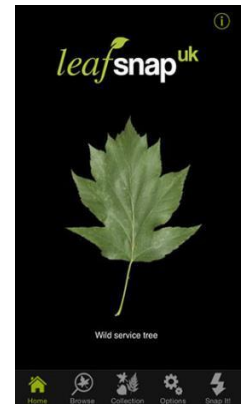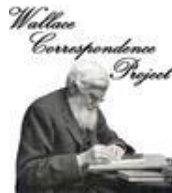
Lucy Robinson
Citizen Science Programme Manager,
Natural History Museum London

NATURAL HISTORY MUSEUM

NHM's citizen science projects

MUSÉE DU CONGO
Madagascar
Montagne d'Ambre
Coll. Schouteden

Madagascar
Cap d'Ambre

Anoplocnemis
madagascariensis
Sign.

Specimen Photo...
http://coreoidea...
MRAC_CSF_00...

Perak

Coll.
Breddin

Lectotypus

ст. Хибины,
Кольск. п-ов
Б. Сумм. ... VII 928

RIO
v. Olfers
Nr. 1166

Typus

HOLOTYPE

云南大勐笼 700 米
1957.IV.11
潞西基东

Юньнань, Дамэнлун,
700 м. 11 . IV. 1957.
Пу Фу-ди и др.

HOLOTYPE
Homoeocerus
(A.)impictus Hsiao

IOZ(E).222017

HOLOTIPO

ARGENTINA:
TUCUMAN
SIAMBOR
I-45

Brailovsky A. det.
THAUMASTUS
... Brailovsky

HEMI-COR-0001

Coll. R. I. Sc. N. B.
Pérou :
ex Coll. Schouteden

Chenomosoma
gummicinctus
Th.

SYN-
TYPE

Mexico
Coll. Signoret.

perfida
det. Stal

Holotype
madura
perfida ♀
Det. by Stål
T.R.Yonke, 1985

Syntype
Madura
perfida Stål

Type Specimen Photographed
CSF_NHMW_041
http://coreoidea.speciesfile.org

Syntype ♂

Specimen Photographed
http://coreoidea.speciesfile.org
...CSF_014

Ruwe...
Scott Elliot
5600.ft.
95-41.

Acanthomia
insignis
type Dist.

Type Holo-
type ♂

BMNH(E)
Imaged for:
http://coreo...

HOLOTIPO

NEW GUINEA: SE
Northern District
Cape Killerton
2-12.V.1965

W.A. Steffan
& Y.M. Huang
Collectors
BISHOP

H. Brailovsky A. det.
CNEIUS
KILLERTONENSIS Brailovsky

Magdus lateralis
Grn. it. Serani
Buf. Bucin.
Lusitan. y Dahmet.

Flavigralla gibbosa, Spin.
Dupont
Bombay.
Fot. VIDANO-IV-1973
per DOLLING (G.B.)

Coll. Spinola box 28
Heteroptera

LECTO-
TYPE ♀

Specimen Photographed
http://coreoidea.speciesfile.org

Borneo
Xántu...

Colpura
armillata
♀ var.

CSF_HNHM 096
Photographed for:
http://coreoidea.speciesfile.or...

HOLOTIPO

COLOMBIA:S...
Nevada de Sa...
Marta,San Seb...
de Rabago,2000 m.
April 1-14,1968

Borys.Malkin
Collector

H. Brailovsky A. det.
ANASA MICANS
Brailovsky

编 号 杭州
采集地
采集期 IV.1958
采集人

Mindanao
MtApo PI
June-July
EAMearns

Type No.
20147
U.S.N.M.

Typhlocolpura
vulcanalis
Bergr.—Type

Holo-
type

F. G. ...
G. Terq...
4000 6000 m...
Bracang...
XI. 1936

Re...
F...
26...

HOLOTYPE
Gralliclava
det. solitaria
W.R.Dolling 1973

ZMUC 00 102

Amer. merid.
Schmidt
Mus. Ferd. Lud
Lygaeus
bilineatus
F. & Fabr.

Disctor bilineatus
(Fabr.)
det. E.Osuna
8-VII-1970

Type specimen imaged for:
http://coreoidea.speciesfile.org/

California Academy
of Sciences
Type
No. 994

ZOONIVERSE

- Atlas of Living Australia DigiVol
- iDigBio
- Les Herbonautes
- Herbaria@Home
- Smithsonian Transcription Center
- etc

ORCHID OBSERVERS

- Exploring the impacts of climate change on the UK's flora, using orchids as a model group

- Outdoor photography and online crowdsourcing

- 1,900 participants

- 55,000 online classifications

- 1,800 new field observations from 90/112 VCs, 200 new sites?

- Identified errors in our existing database

Bee Orchid (collected in 1918)

The Killer Within: Wasps, but not as you know them

Project Plumage

www.projectplumage.org

Patterns of participation

Our statistics show a long-tail pattern of engagement, whereby 14 out of 600+ participants were the most active contributors, and 2 volunteers in particular were 'super-classifiers'.
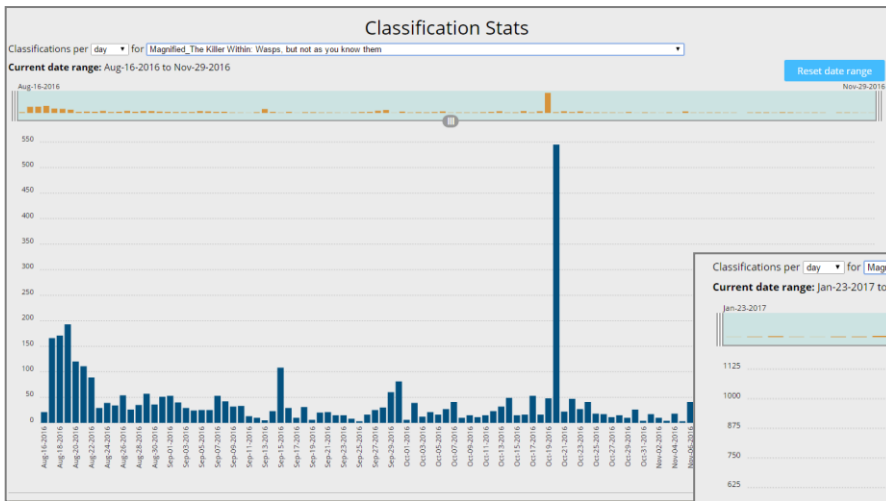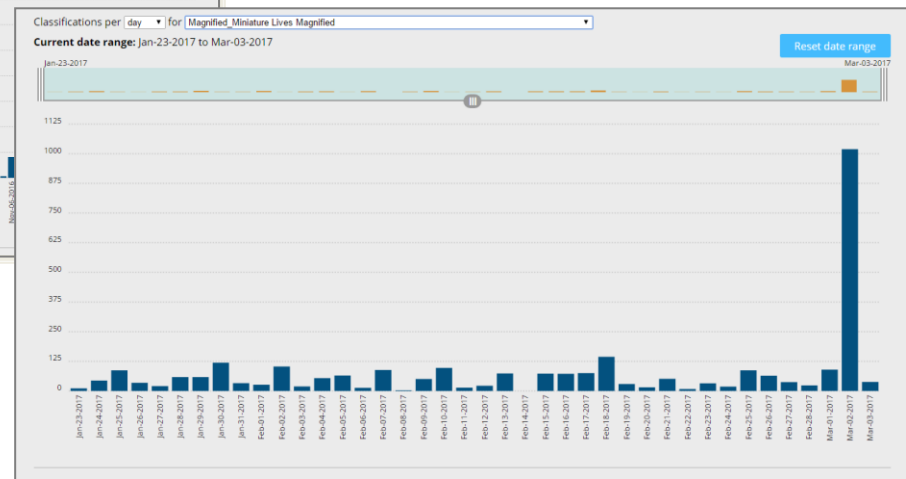
Visiteering

On site crowdsourcing with a behind the scenes tour, talk with a curator and support by museum staff throughout the day.

October 20th 2016 - as part of WeDigBio

March 2nd 2017

LEARN CitSci
Learning and Environmental Science Agency Research Network for Citizen Science

A collaboration between citizen science practitioners and learning researchers in UK and US.

Four year project starting Spring 2017.

Research into the learning outcomes and development of environmental science agency for young people who participate in NHM-led citizen science projects.

We will be studying young people taking part in crowdsourcing projects on the Zooniverse.

Funded by NSF, Wellcome and ESRC.

Pros and cons of the Zooniverse

Pros

- 1 million registered users

- Project builder

- Staff support

- Long-term commitment to the platform

- Publicity and high profile

- Low cost

Cons

- Competition between projects for participants

- Project builder – backlog of projects awaiting approval

- Staff overstretched

- Fairly fixed layout and functionality within the site

- Limited exposure for your brand

Considerations / discussion points

- Its not free! Doing citizen science well requires resources. Cost vs value.

- Its not an 'easy option' – you still need to support and train the volunteers

- It's not suitable in all circumstances or for all collections

- We may need to think of new publicity mechanisms – public events have not been very successful recruitment tools for us.

- It can attract alternative sources of funding for digitisation – how can we exploit that?

- Awareness raising for the cause – why are we digitising all this stuff in the first place? Opportunities for learning, engagement, inspiration, role models

Questions?

l.robinson@nhm.ac.uk

NATURAL HISTORY MUSEUM