Increase productivity of DigiVol? Challenge accepted!

Paul Flemons, Simon Bear, David Baird, David Martin, Rhiannon Stephens, Leonie Prater,

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Smithsonian Institution - US National Herbarium

The United States National Herbarium (US) is housed in the National Museum of Natural History, Smithsonian Institution, located in Washington, DC. Many of the plant groups represented in the U.S. National Herbarium rank among the finest and/or largest in the world. The United States National Herbarium was founded in 1848, when the first collections were accessioned from the United States Exploring Expedition (50,000 specimens of 10,000 species). Current holdings total 5 million specimens, making this collection among the ten largest in the world representing about 8% of the plant collection resources of the United States. The herbarium is especially rich in type specimens ($110,000).

Volunteers: 156
Tasks: 17830 in total (99% transcribed, 97% validated)
Expeditions: Specimens 25
Underway: 4
Complete: 21

NMNH US Honour Board

<table>
<thead>
<tr>
<th>Day Tripper</th>
<th>View Top 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jaclyn Metzger</td>
<td>56</td>
</tr>
<tr>
<td>Weekly Wonder</td>
<td>View Top 20</td>
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<tr>
<td>Jaclyn Metzger</td>
<td>127</td>
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<tr>
<td>Monthly Maestro</td>
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<td>Jaclyn Metzger</td>
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<tr>
<td>Helen Bell</td>
<td>9473</td>
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NMNH US Expeditions

<table>
<thead>
<tr>
<th>Name</th>
<th>Tasks completed</th>
<th>Volunteers</th>
<th>Sponsoring Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smithsonian Institution - Euphorbiaceae Galore Set 6!</td>
<td>8</td>
<td></td>
<td>Smithsonian Institution - US National Herbarium</td>
</tr>
</tbody>
</table>

351 of 500 tasks transcribed (70%)
314 tasks validated (62%)
Public Participation in Digitising at the Australian Museum

Stage 1

EMu Database

Image, species name, catalogue number

DigiVol
Volunteers Digitising Collections - Capturing images and "partial records"

Public Participation

Nicole and Louise

Stage 2

Complete record and georeference

DigiVol

Image, species name, catalogue number
<table>
<thead>
<tr>
<th></th>
<th>DigiVol Lab</th>
<th>DigiVol Online</th>
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</thead>
<tbody>
<tr>
<td>Paid staff</td>
<td>1</td>
<td>Volunteer coordinator – 0.2 per week</td>
</tr>
<tr>
<td>Volunteers</td>
<td>70 per week</td>
<td>Volunteers – 900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data processing</td>
<td>Paid staff - 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>Paid staff – 2.2</strong></td>
<td><strong>Transcribe 30000 specimens a year</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Volunteers – almost 1000</strong></td>
<td></td>
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</table>
Why do we need to make DigiVol more productive?

Crowdsourcing sites such as DigiVol have been remarkably productive but the task is huge.

Through DigiVol something like 60000 tasks are transcribed and validated per year, varying in complexity from simple labels with only a few words, through complex labels with georeferencing to double page field diaries with many hundreds of words per page.

Across the biodiversity sector we have a big job – 3 billion plus specimens depending on your size threshold.
How to increase productivity?

• Increase overall numbers of volunteers
  AND/OR
• Increase the numbers of tasks completed by each volunteer
How to increase overall numbers of volunteers?

Attract more volunteers through marketing

Social media is useful but we need more

DigiBlitzes
  Ad hoc
  Australian Science Week
  WeDigBio
Offer expeditions that appeal to a broader audience

- camera trap images
- images for trait extraction
Welcome to the WildCount

WildCount overview

It is easy to believe that common native animals like kangaroos, possums, lyrebirds and wombats will always be around. Is it possible that, despite being relatively common, they are in decline? WildCount aims to answer this question. WildCount is a 10-year fauna monitoring program that uses motion-sensitive digital cameras in 200 sites across 146 parks and reserves in eastern NSW. WildCount looks at trends in occurrence of animals at these sites, to understand if animals are in decline, increasing or stable.

WildCount personnel

Expedition Leader

Scientists

Collection Managers

Technical Officers
How to increase overall numbers of volunteers?

Offer expeditions that appeal to a broader audience

- camera trap images
- images for trait extraction
Welcome to the Australian Museum's Fish Traits

Australian Museum's Fish Traits overview

Fish Traits are excellent

Australian Museum's Fish Traits personnel

Expedition Leader

Scientists

Collection

Technical Officers
### Institution: Australian Museum Ichthyology
### Project: Australian Museum's Fish Traits
### Catalog Number: Taxa:

<table>
<thead>
<tr>
<th>1. Details</th>
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<tbody>
<tr>
<td>Common Name</td>
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<td>Species Name</td>
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<tr>
<td>Pattern</td>
<td></td>
<td>Colour</td>
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<tr>
<td>Body Shape</td>
<td></td>
<td>Characters</td>
</tr>
<tr>
<td>Life Stage</td>
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</table>
How to get each volunteer to do more?

Motivate them

• Show them what the scientific goals are
• Show them how they are making a difference
• Reward their efforts
How to get each volunteer to do more?

Motivate them

• Show them what the scientific goals are

• Show them how they are making a difference

• Reward their efforts
Volunteer score: 371
Tasks transcribed: 117 (85 of which have been validated)
Tasks validated: 254
First contribution: 4 years ago

How you're making a difference!

- You have added 40 species to the ALA
- You have contributed to 18 new field observations
- You have participated in 28 expeditions
- You have transcribed 0.06% of the total transcriptions on DigiVol
How to get each volunteer to do more?

Motivate them

- Show them what the scientific goals are
- Show them how they are making a difference
- Reward their efforts
More volunteers AND more tasks per volunteer

Structured volunteering

Examples
- onsite at the Museum – DigiVol Lab
- schools
- universities
- offenders returning to the workforce
- work for the dole
- retirement villages
Structured volunteering – what is required?

Structured volunteering ideally requires the following:

1. a lab or office like space that has computers with internet access
2. onsite training and training materials
3. onsite supervision by suitably trained coordinators
4. structured reward system with the institution involved such as
   - Educational/Vocational certificate for job seeking
   - Behind the scene tours
   - Video conference sessions with collection staff

More volunteers AND more tasks per volunteer
Thankyou
ALA and IDigBio