

# Arrangements for Data Sharing and Reuse in Citizen Science Projects

"Data from the People for the People" Session  
SCIDATACON 2014 @ New Delhi

Tyng-Ruey Chuang

Academia Sinica  
Taipei, Taiwan

# Outline

- Lessons from Wikipedia
- Issues when using social media
- Experiences in making arrangements
- You gotta have apps!
- Toward best practices

Collaboration

# WIKIPEDIA

## English

*The Free Encyclopedia*  
4 000 000+ articles

## 日本語

フリー百科事典  
815 000+ 記事

## Español

*La enciclopedia libre*  
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## Polski

*Wolna encyklopedia*  
908 000+ haseł

## 中文

自由的百科全書  
500 000+ 條目



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Търсене · Izdey · **Bilatu** · Suk · Bilnga · Traži · खोजें

# Collaborative Works

- Works created and used by multiple members at the same time.
- Fluid in member composition; indefinite in the time span of one's participation.
- Materials contributed by collaborators and/or taken from other sources.
- Producing works of some social value.

# Public Licenses

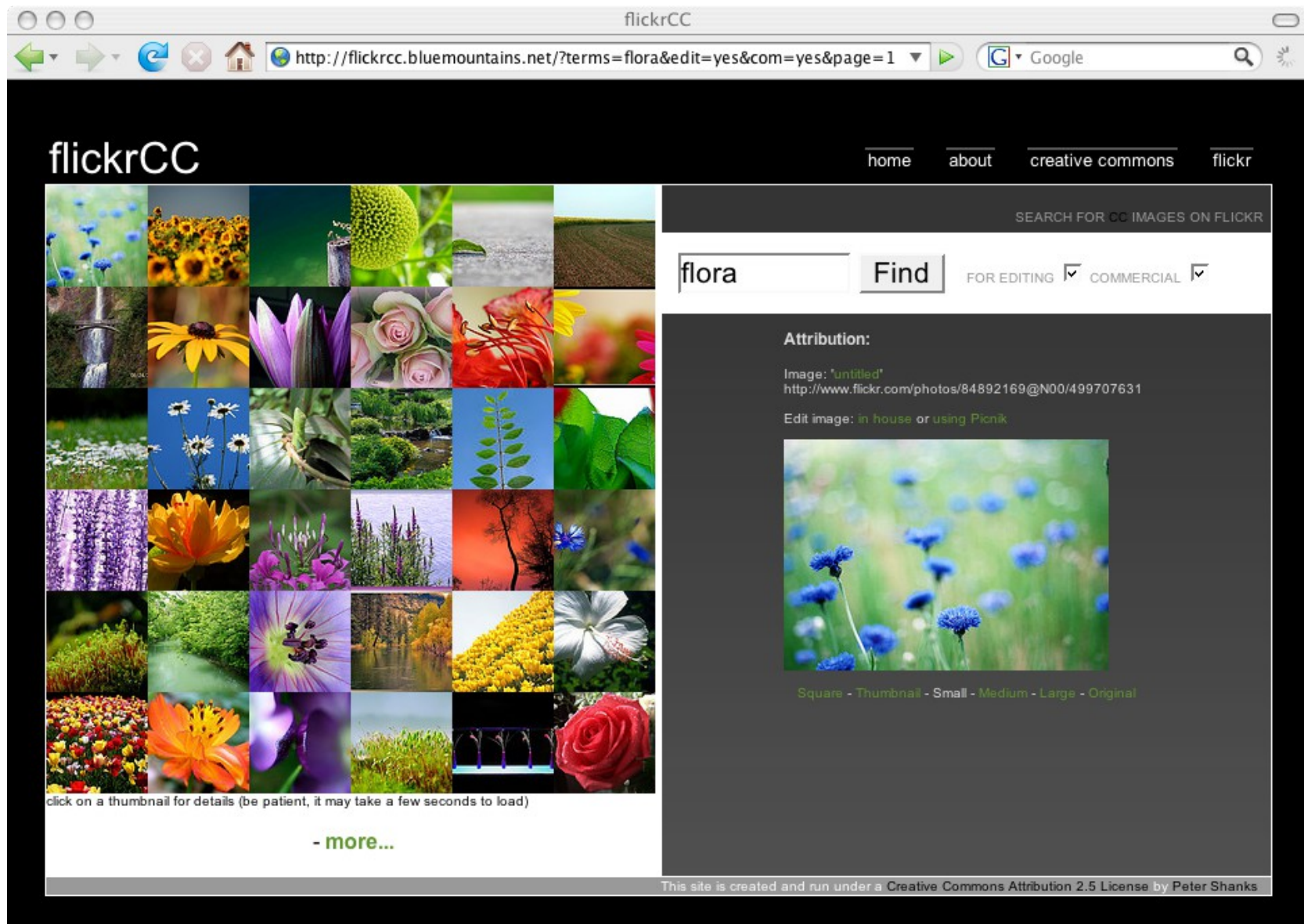
- "Some Rights Reserved"; Other rights to use the work are granted to the public with a license.
- The license is worldwide, royalty-free, non-exclusive, and perpetual.
- The licensor makes clear what is to be licensed, and under what license.
- A licensee is any person who agrees to the license, and uses the work.

# Creative Commons Licenses



# Search by License

<http://flickrcc.bluemountains.net>



The screenshot shows a web browser window with the URL <http://flickrcc.bluemountains.net/?terms=flora&edit=yes&com=yes&page=1>. The page features a navigation menu with links for [home](#), [about](#), [creative commons](#), and [flickr](#). A search bar contains the text "flora" and a "Find" button. To the right of the search bar are checkboxes for "FOR EDITING" and "COMMERCIAL". Below the search bar, the "Attribution:" section displays the image title "untitled", the URL <http://www.flickr.com/photos/84892169@N00/499707631>, and the text "Edit image: in house or using Picnik". A large image of blue flowers is shown below the attribution information. At the bottom of the image area, there are links for "Square - Thumbnail - Small - Medium - Large - Original". The main content area is a grid of various flower images. At the bottom of the grid, there is a link for "- more...".





# Collaborative Works + Public Licenses

- Participants make available some of their works.
- Wanted: The right to make modifications, and the obligation to share the results likewise.
- Arrangement: All participants agree to use a particular public license for the output of their collaboration.
- Whoever agrees to the license can participate!

# Citizen Science Projects

- Not all contributors are equal?
  - scientists
  - participants
- Not all contributions are good?
  - data quality
  - personal data
  - sensitive information
  - BTW, Is this data or creative work?

# Making Arrangements

- Put them into writing:
  - public licensed/domain; use of personal data; dealing with sensitive information
  - principles of data quality, integrity, and availability
- Community feedback and overseeing
- Use common legal, technical, and practical tools to ease the task
- Good provenance makes useful data products

# Social Media



# Terms of Service

- The pre-conditions one must agree to before using the provider's service:
  - rights to user contributions
  - use of personal data
  - level of service quality
- The service providers makes the rules!
  - (Citizen) Scientists are just users
- Users can make parallel arrangements for themselves.

# Issues of Metadata and Provenance



The screenshot shows a web browser window with the following elements:

- Browser title: Flickr and Facebook STILL Strip EXIF Data | Plagiarism Today
- Address bar: www.plagiarismtoday.com/2010/04/22/flickr-and-facebook-still-strip-exif-data/
- Page header: **PT PlagiarismToday** (Content Theft | Copyright Infringement | Plagiarism)
- Navigation menu: Home, About, Consulting, DMCA Contacts, Stock Letters, Stop Int...
- Article title: **Flickr and Facebook STILL Strip EXIF Data**
- Post information: Posted on April 22, 2010 by Jonathan Bailey • 31 Comments
- Text snippet: In November 2008 I wr... highlighted how Flickr a out EXIF data in image...  
comment to that post...
- Image: The Flickr logo is partially visible at the bottom of the page.



# Your (embedded) metadata? But I run the services!

<http://www.embeddedmetadata.org/social-media-test-results.php>

Embedded Metadata Initiative

www.embeddedmetadata.org/social-media-test-results.php

## Social Media sites: photo metadata test results

We have uploaded a test image with embedded metadata and have checked if any of the embedded values are displayed and if so, which ones. As a next step we have tried to save the picture from a Social Media web site or system on our computer and then we checked what metadata fields are still embedded. Find the test results in the grid below - in short: a green light indicates good results, a yellow one not so good ones and the red light that the handling of metadata should be improved, grey means: has not been tested.

[You can read the full details of the tests on this page.](#) It lists all details about what was tested and what the icons below stand for.

Social Media site/system	Summary	Displays correctly?	Displays 4Cs?	Save As embedded?	Download embedded?
<b>500px</b> - <a href="http://www.500px.com">www.500px.com</a> Tested in March 2013	Most relevant fields shown, copyright was overridden, in downloaded file we only found Exif metadata. Save As is disabled.	Exif	IPTC	IPTC	Exif  IPTC IIM  IPTC XMP
<b>Dropbox</b> - <a href="http://www.dropbox.com">www.dropbox.com</a> Tested in March 2013	No metadata shown, all embedded fields are preserved in the image files.	Exif	IPTC	IPTC	Exif  IPTC IIM  IPTC XMP
<b>Facebook</b> - <a href="http://www.facebook.com">www.facebook.com</a> Tested in June 2013	Metadata not shown anymore, all embedded metadata stripped-off from image files.	Exif	IPTC	IPTC	Exif  IPTC IIM  IPTC XMP
<b>Flickr</b> FREE account - <a href="http://www.flickr.com">www.flickr.com</a> Tested in June 2013 (PRO account may show other results)	A few metadata fields shown, 'by' was overridden, for any downscaled rendition all embedded metadata are stripped-off from image files, only the Original rendition keeps all metadata.	Exif	IPTC	IPTC	Exif  IPTC IIM  IPTC XMP Exif  IPTC IIM  IPTC XMP
<b>Google+</b> - <a href="http://plus.google.com">plus.google.com</a> Tested in March 2013	Primarily Exif metadata shown, all embedded fields are preserved.	Exif	IPTC	IPTC	Exif  IPTC IIM  IPTC XMP

Find: comment    Next Previous    Highlight all    Match case    Reached end of page, continued from top

Comparison

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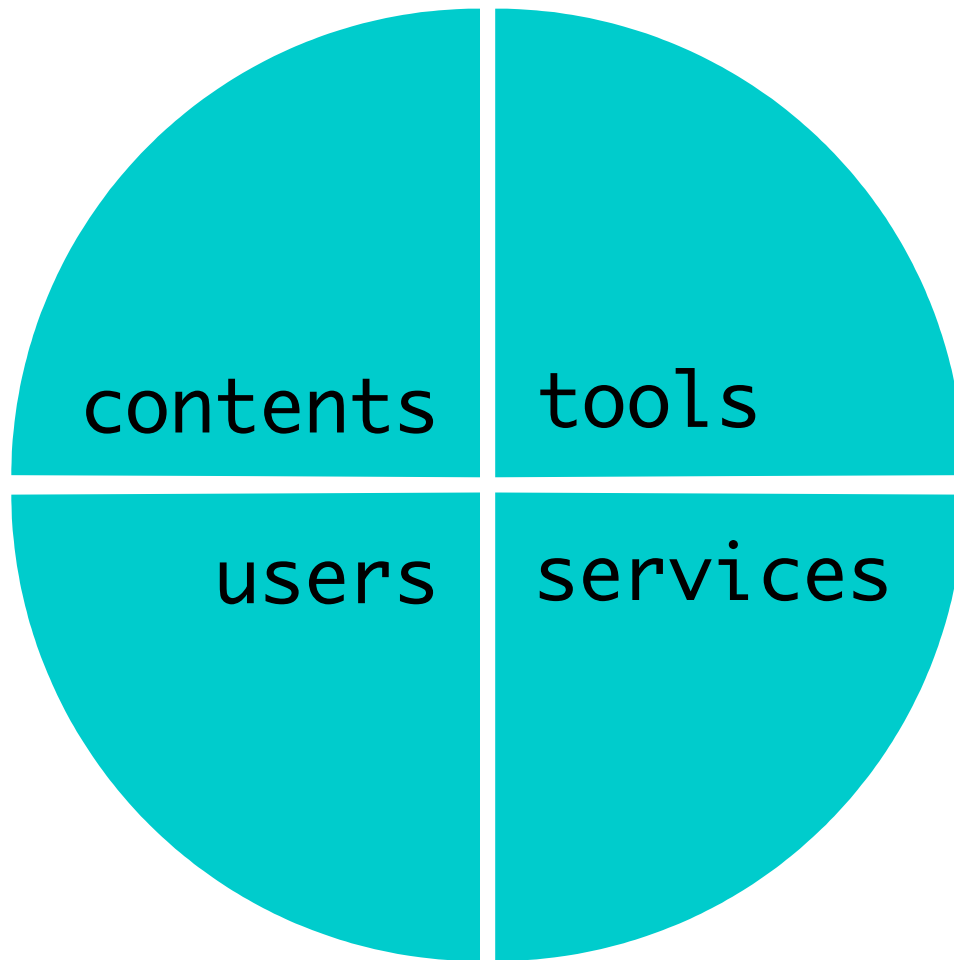
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contents

tools

users

services



contents

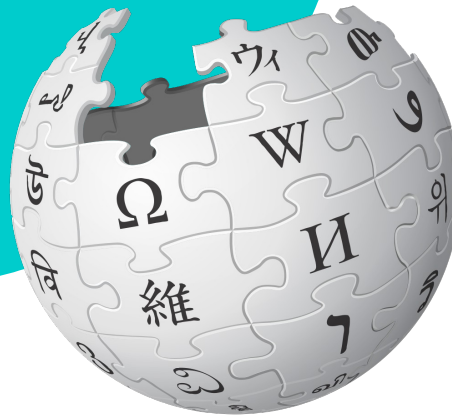
tools

users

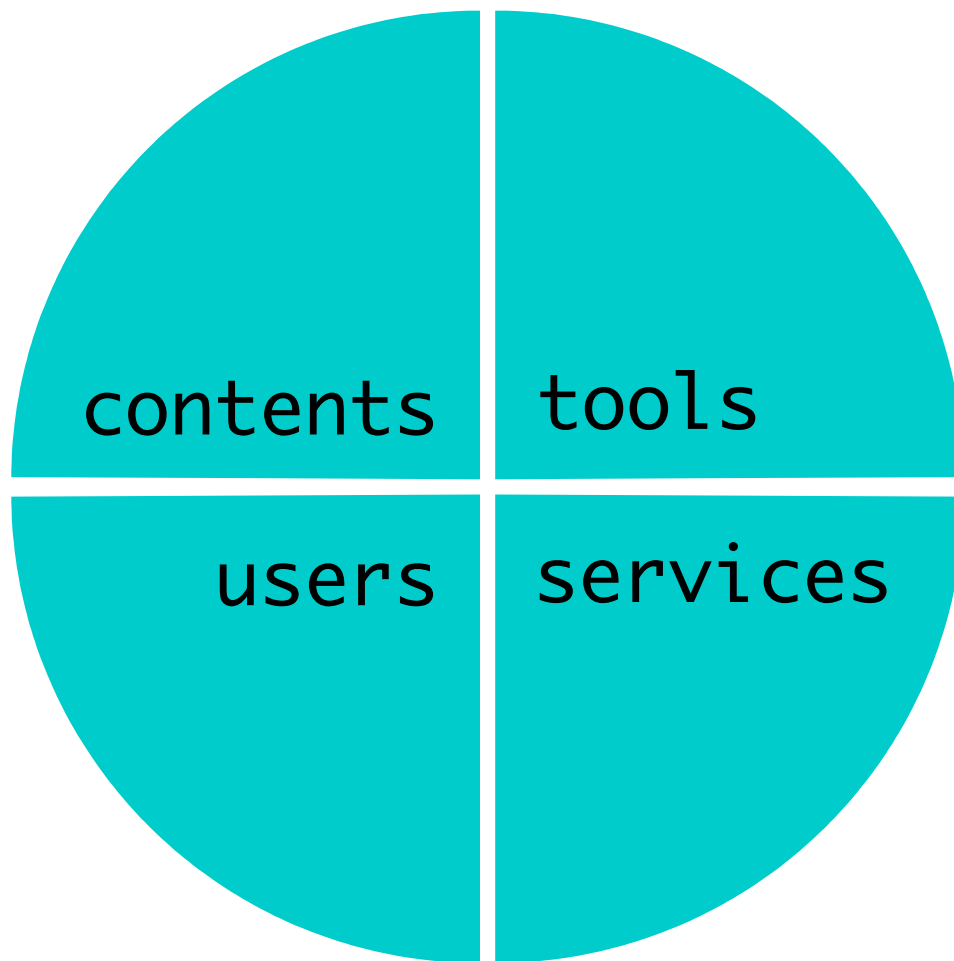
services

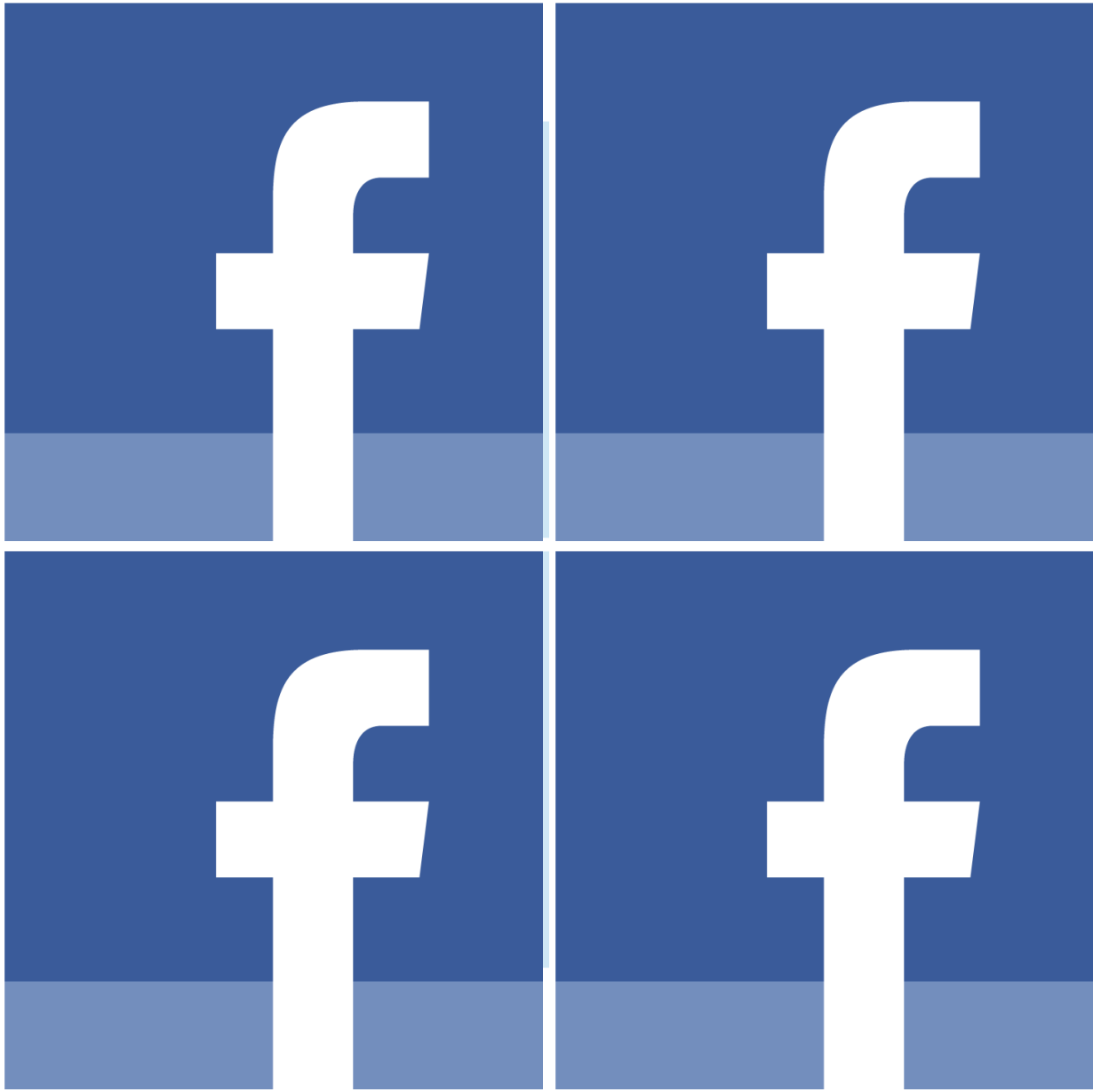


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FOUNDATION











Advertisement

# A Collaboration on Moving Roadkill Data out of A Silo



一雙無法瞞上的深邃眼珠,你看見了嗎~  
請和我們一同努力,讓悲劇不再發生!



**Nature's Eyes**  
路死個體資訊一: 23°28'45.02" N 120°28'43.80" E  
發現地點:市區海拔高度100公尺,發現日期 102年2月。  
路死個體資訊二: 23°22'26.42" N 120°34'17.25" E  
發現地點:台三線海拔高度452公尺,發現日期102年3月。



### 四處爬爬走(路殺社, Reptile Road Mortality)

- 成員 活動 相片 檔案 通知 + 建立社團

- 撰寫貼文 新增相片/影片 提問題 新增檔案

留個言吧.....

#### 置頂貼文



**林德恩**

各位夥伴大家好：  
由於「台灣野生動物路死觀察網」資料彙整進入最後階段  
目前電腦程式已順利自動擷取下6成的資料  
但還有4成資料是在「相簿」中，無法被程式讀取到  
為了盡快將這4成資料擷取到資料庫裡.....  
更多

關於 3,536 位成員

#### 公開社團

社團四大宗旨：  
1.改善路死——藉由大量的資料蒐集，分析路死嚴重的路段、季節及種類，改善道路設計或增加廊道、圍籬等設施，以減少野生動物因國內道路開發與車流量日漸增加而造成的直接死亡(roadk..... 更多

3,536 位成員 (56 位新成員) · 以電子郵件邀請

+ 加成員到社團



Waterr Chen 標本號RN1296 採集號ZHX20131007 感恩

11月18日 10:42 · 讚



留言.....



謝中和

2013/10/03 南蛇-幼蛇  
台東縣池上鄉台20甲線約3.05k  
緯度: N 23°7.873' (23°7'52.4")  
經度: E 121°11.482' (121°11'28.9")



讚 · 留言 · 分享 · 追蹤貼文 · 10月6日 23:28

12 個人都說讚



林德恩 #南蛇#, \*Ptyas mucosus\*

10月7日 1:17 · 已編輯 · 讚



Waterr Chen 標本號RN1295 採集號ZHX20131003 感恩

11月18日 10:37 · 讚



留言.....



























- ### 主選單
- 關於路殺社
    - 社團宗旨
    - 管理員介紹
    - 創用CC授權
    - 最新消息
    - 加入我們
  - 路殺資料庫
    - 物種分類樹
    - 物種圖庫
    - 圖片審核總覽
    - 路殺觀測紀錄
    - 路殺分布地圖
  - 學習教室
    - 如何記錄路死動物
    - 照片上傳臉書社團說明
    - 路死動物拍照說明
    - 定位教學
    - 路死標本寄送SOP
    - 全台同步大調查說明
    - 生物小百科
  - 下載
    - App
    - 記錄表格下載
    - 路殺社第1屆年會
    - 保育類野生動物名錄
    - 下載路死紀錄

- ### miseru
- 首頁
  - 建立路死紀錄
  - 我的路死紀錄
  - 使用者列表
  - ADMIN內容管理
    - (管理者)我的內容
    - 文章內容管理
  - 建立內容
    - Panel
    - 文章頁面
    - 最新消息
    - 路死紀錄
  - 資料匯入管理

首頁

### 圖庫總覽

前往分類圖庫: [動物圖庫](#) [地圖瀏覽](#)

 <p>521357714617045 作者: 吳銘 (cc) BY 2013-10-07 13:46:04</p>	 <p>作者: 劉珊珊 (c) ALL RIGHTS 2013-10-07 13:20:11</p>	 <p>663608226993136 作者: 陳秀晴 (c) ALL RIGHTS 2013-10-07 04:28:15</p>	 <p>663607350326557 作者: 陳秀晴 (c) ALL RIGHTS 2013-10-07 04:25:20</p>	 <p>663605940326698 作者: 陳秀晴 (c) ALL RIGHTS 2013-10-07 04:22:34</p>	 <p>663605733660052 作者: 陳秀晴 (c) ALL RIGHTS 2013-10-07 04:20:34</p>
 <p>663605453660080 作者: 陳秀晴 (c) ALL RIGHTS 2013-10-07 04:18:35</p>	 <p>663603120326980 作者: 陳秀晴 (c) ALL RIGHTS 2013-10-07 04:08:43</p>	 <p>作者: 劉珊珊 (c) ALL RIGHTS 2013-10-07 03:34:21</p>	 <p>521017964651020 作者: 吳銘 (cc) BY 2013-10-06 17:14:31</p>	 <p>521017287984421 作者: 吳銘 (cc) BY 2013-10-06 17:12:08</p>	 <p>521016774651139 作者: 吳銘 (cc) BY 2013-10-06 17:10:14</p>
 <p>521014844651332 作者: 吳銘 (cc) BY 2013-10-06 17:03:54</p>	 <p>作者: 蘇哲弘 (c) ALL RIGHTS 2013-10-06 16:25:59</p>	 <p>499196486843671 作者: 謝中和 (cc) BY-NC-SA 2013-10-06 14:30:57</p>	 <p>499195176843802 作者: 謝中和 (cc) BY-NC-SA 2013-10-06 14:28:24</p>	 <p>作者: 莊克敏 (cc) BY-NC-SA 2013-10-06 01:55:36</p>	 <p>695281440484707 作者: AWei H... (c) ALL RIGHTS 2013-10-05 12:30:24</p>
 <p>662816190405673 作者: 陳秀晴 (c) ALL RIGHTS</p>	 <p>662815877072371 作者: 陳秀晴 (c) ALL RIGHTS</p>	 <p>662815113739114 作者: 陳秀晴 (c) ALL RIGHTS</p>	 <p>662814860405806 作者: 陳秀晴 (c) ALL RIGHTS</p>	 <p>520160304736786 作者: 吳銘 (c) ALL RIGHTS</p>	 <p>4918961631743 作者: Ya-wan... (c) ALL RIGHTS</p>



# 台灣野生動物路死觀察網 (Taiwan Roadkill Observation Network)

改善路死 · 公民科學 · 環境教育 · 珍貴典藏

關於路殺社 | 路殺資料庫 | 學習教室 | 下載

- 主選單
- 關於路殺社
    - 社團宗旨
    - 管理員介紹
    - 創用CC授權
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    - 記錄表格下載
    - 路殺社第1屆年會
    - 保育類野生動物名錄
    - 下載路死紀錄

## 首頁

### 499195176843802

檢視 編輯 書籍大綱 Devel

由 import 在 2013, 十月 6 - 14:28 發表  
[Ptyas mucosus Cope, 1861](#)

#### 標記之物種:

Ptyas mucosus

#### 標記之俗名:

南蛇

#### Facebook:

<http://www.facebook.com/photo.php?fbid=499195176843802&set=gm.660168334023982&type=1>



圖片作者: 謝中和

2013/10/03 南蛇-幼蛇

台東縣池上鄉台20甲線約3.05k  
緯度: N 23°7.873' (23°7'52.4")  
經度: E 121°11.482' (121°11'28.9")

#### 資料來源:

路殺社 (FB)

#### 紀錄地點:

鳳林鎮, 花蓮縣  
Taiwan

## miseru

- 首頁
- 建立路死紀錄
- 我的路死紀錄
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  - 路死紀錄
- 資料匯入管理
- 管理
- 聯絡網站管理員



You Have Got App!

# "Drupal In the Middle" App

- Requirements for a (road)killer App:
  - Written arrangement for all participants
  - We like images raw! (EXIF et. al.)
  - Provenance is paramount
- The App uploads raw images et. al. to Drupal
- Drupal pushes digests to the Facebook group
  - sanitized sensitive/personal data
  - link back to the originals in Drupal
- Work in Progress!

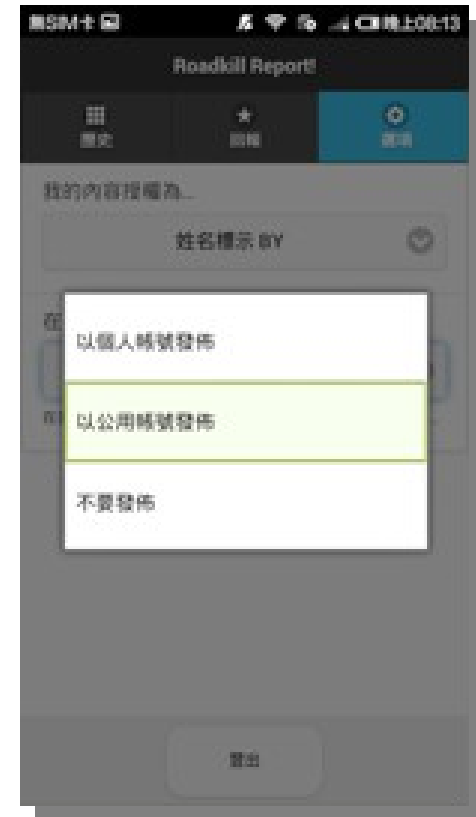




Privacy Policy



Public Licensing



Anonymous Posting

檢視 編輯 新增大圖 修訂版本 追蹤 Clone Convert Devel

2014, 十月 14 - 15:02 — jimshsu



圖片作者: 許正欣  
App發布選項:  
以自己FB帳號發布  
資料來源:  
App回報  
紀錄地點:  
花蓮縣吉安鄉民治路  
Taiwan

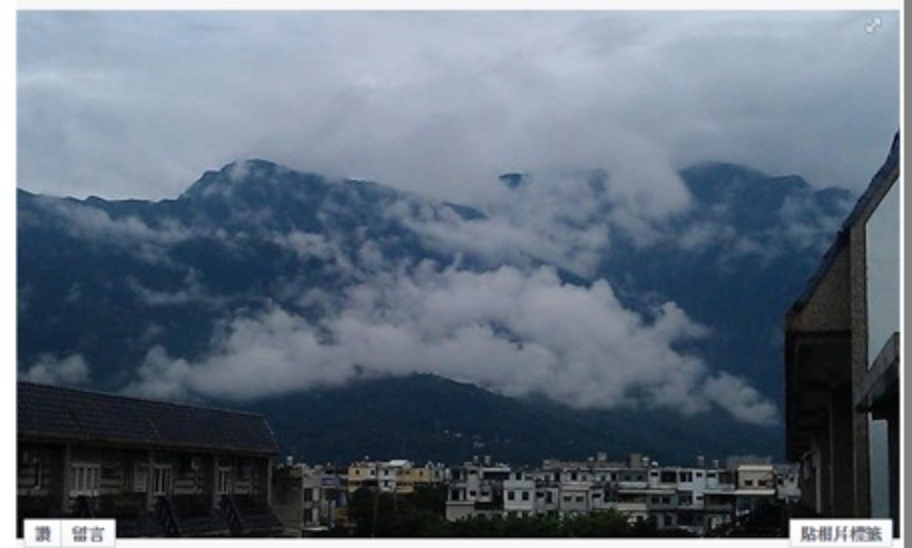


路死紀錄時間: 2013/09/01  
審查狀態: 未確認  
是否為路死:  
Yes  
FB\_PHOTO\_ID:  
10203028733901417  
FB\_POST\_ID:  
10202094276380563\_1505820266353613  
瀏覽次數: 2

In Drupal

In Facebook

許正欣貼在 FB 推送測試-路死觀察網的相片  
[回到相簿](#)



許正欣 > FB推送測試-路死觀察網  
[roadkillApp: 13566]  
發現於: 花蓮縣吉安鄉民治路  
[latlng: 23.97929444444444, 121.59169999999999]  
紀錄時間: 2013-09-01  
EXIF時間: 2013:09:01 09:48:43  
[讚](#) [留言](#) [接收通知](#) · 分享 · 1小時前

來自: 許正欣貼在 FB 推送  
測試-路死觀察網的相片  
分享對象:  
FB推送測試-路死觀察網  
[標籤出你的朋友](#)  
[編輯拍攝地點](#)

Openness

# Openness?

- Libre
  - can be used by people
- Digital
  - can be used by machines and put online
- Raw
  - can be modified and repurposed
- Common (format & vocabulary)
  - can be exchanged and interlinked
- Transparent
  - (the process) can be fixed; meta-level

# Openness as Best Practice

- Libre
- Digital
- Raw
- Common
- Transparent

Open Content, Open Data, Open Source,  
Open Collaboration, Open Science, ...

Fin