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# Strangers, Stewards and Newcomers: Stories of Identity and Participation in Citizen Science

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# *Identity and Participation*



Identity theory is useful for explaining personal and social phenomena, such as citizen science.

(Dillon et al. 1999)

Who participates in citizen science, and why ... *The identity of the citizen scientist ...*

Who doesn't participate and why ... *The identity of the non-participant ...*

**Characteristics**

**Motivations**

**Barriers**

# ***Cross-Programmatic Research***



**9 Australian contributory projects**

**Over 900 citizen scientists**

**Conservation, non-conservation and mixed projects**

**Online and offline, individual and group activities**

**Over 1,400 non-participants**

Cornell Lab of Ornithology 2013, 2014  
Evans & Stoker 2016  
Nisbet et al. 2009

## *Citizen scientists are .....*



Diverse ...

Motivated by different things ...

Characterised by different interests ...

Predominantly aged 40-69 and female

### **Different than non-participants:**

- More orientated towards science and the environment
- More politically engaged
- More highly educated

# ***Environmental Stewards***



## **Conservation projects attract environmental stewards:**

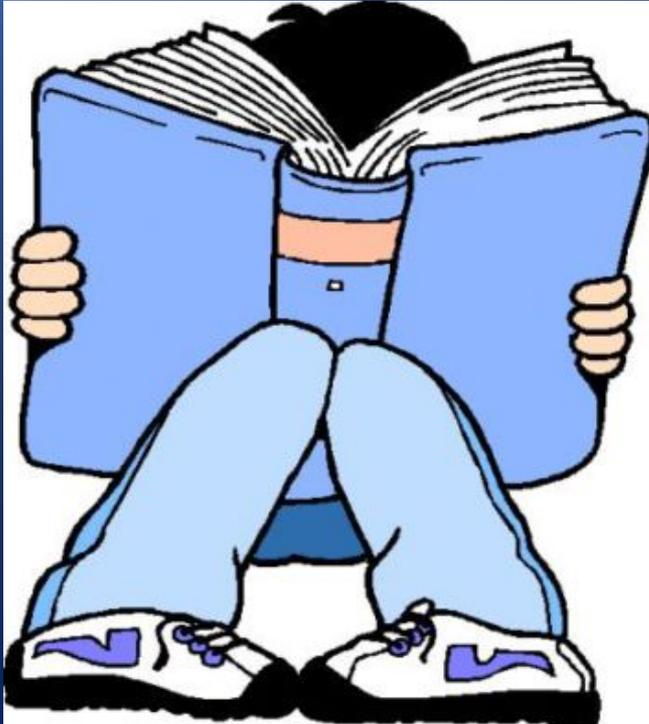
- ClimateWatch
- Waterwatch
- Beach-nesting Birds
- Great Koala Count

## **Characteristics and motivations:**

- Strong awareness of environmental issues
- A sense of being connected to nature
- Strongly motivated to help the environment
- Participate in other citizen science
- Actively politically engaged



## *Introverts and Extroverts*



One project included two distinct groups of participants ..... The introverts and the extroverts:

- DigiVol

### **Characteristics and motivations:**

- Half participate in other citizen science
- Varied motivations: self-enjoyment, science, being able to contribute to the project
- Can contribute online without having to interact with others
- Enjoy the social engagement through participation

## *The Men*



**70% of participants surveyed were female, so which projects are attracting the most men?**

- Beach-nesting Birds (46%)
- Fireballs in the Sky (77%)

**Characteristics and motivations of Fireballs participants:**

- Topic
- Science and technology
- Australian outback

## ***Newcomers***



Some projects act as “entry points” for volunteers new to citizen science:

- BioBlitzes
- Cat Tracker
- Fireballs in the Sky

### **Characteristics and motivations:**

- Have not yet participated in other citizen science projects
- Motivated by the project topic, self-enjoyment or protect their local area
- Not necessarily environmentally orientated or politically engaged

## Millennials and Gen Z



Young people were found in most projects studied, but very small percentages.

	18-19 year olds	20-29 year olds
n=	11 (1%)	53 (6%)
Gender	91% female	81% female
Other CitSci	91% none	75% none

### Characteristics and motivations:

- Have not yet participated in other citizen science projects
- Motivated by the project topic, an interest in science and/or to help the environment
- More environmentally orientated and politically engaged than non-participants
- Highly confident with technology

## *Strangers*



Citizen science is an unknown phenomenon for non-participants.

### **Barriers:**

- Unaware of citizen science
- Too many other competing commitments

### **Characteristics:**

- Lower education levels
- Less politically engaged
- Less orientated towards science and the environment

### **What do they have in common with citizen scientists?**

- Technologically savvy
- Enjoy learning about science
- Considerate of animal wellbeing
- Fond of their local area
- Feel that sense of community is important

## ***Key Messages***



**Multiple project participation.**

**Multiple modes of participation.**

**“Entry point” projects.**

**Millennials/Gen Z interested in science and/or the environment.**

**Men dig astronomy.**

**Raise awareness ... spread the word ... make an introduction.**



## Acknowledgements

ACT Government [www.act.waterwatch.org.au](http://www.act.waterwatch.org.au)

Australian Museum <https://australianmuseum.net.au/>

Birdlife Australia [www.birdlife.org.au](http://www.birdlife.org.au)

Curtin University [www.curtin.edu.au](http://www.curtin.edu.au)

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