

Data Collection for measuring Biodiversity between Zoos and Non-Zoo Facilities

Research Background:

I wanted to identify the differences between zoos and non-zoos through research focusing on biodiversity. I started by creating a database exploring four zoos and four non-zoos using the Simpson's Biodiversity Index Calculator before comparing the information and confirming my findings.

Research Hypothesis:

I hypothesise that zoos should have greater biodiversity than AALs because they are generally larger, have more investment, and operate on a wider scale and have a greater reach in accessing various reptiles and amphibians.

Methods:

I contacted and researched zoos by telephone and online researching zoo published species datasets and stocklists (secondary data), while AALs were researched using online animal profiles on their websites. I also prepared questions for the zoos and reviewed their websites for additional information. For AALs, I used online sources to identify reptile and amphibian species. Once all the secondary data was gathered the next step was to turn this information into primary data using Excel and the Simpson's Biodiversity Index Calculator for comparative analysis.

Results:

The Simpson's Biodiversity Index Calculator measurements were as follows (Closer to 1 = higher biodiversity):

Tom's Talking Reptiles – **0.9654**

Chester Zoo – **0.9528**

Animal Cwtch (AAL) – **0.9437**

Living Things AAL – **0.9286**

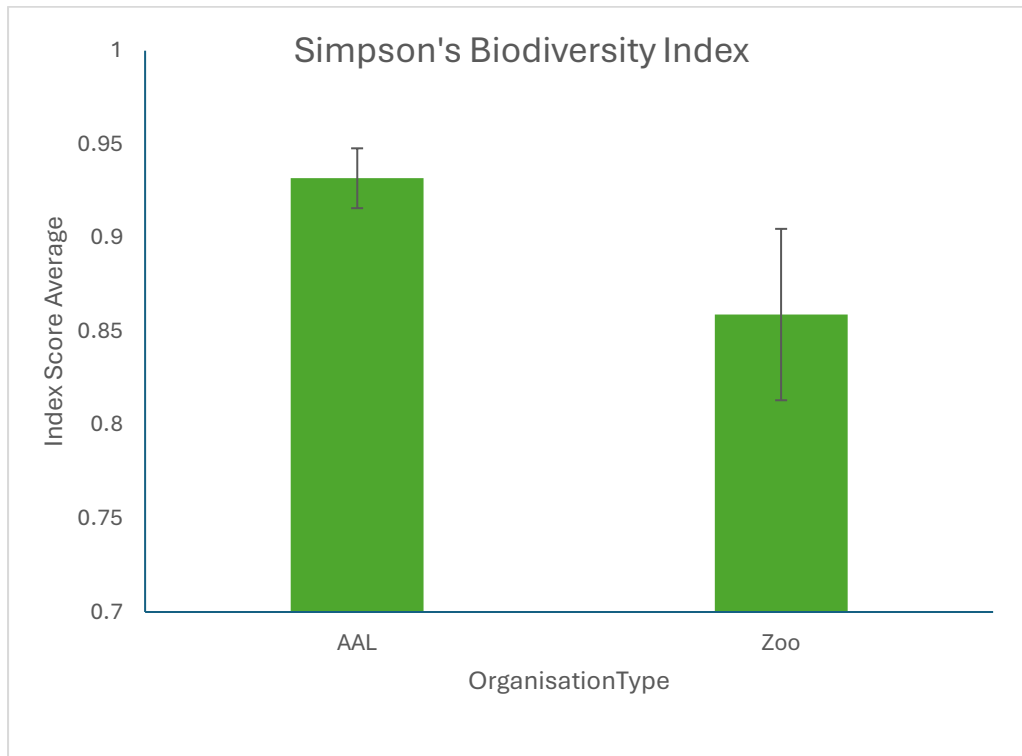
Marwell Zoo – **0.8995**

Reptile Academy – **0.8896**

London Zoo – **0.8451**

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Edinburgh Zoo – **0.7384**



Based on the above bar graph you can see when comparing the Organisation Type and Index Score Average, that AAL's have a higher Biodiversity Index Score than zoos.

Conclusion:

My research and comparative analysis using the Simpson's Biodiversity Index Calculator shows that AALs have a higher biodiversity for reptiles and amphibians when compared to zoos. Which means my original hypothesis was incorrect, so just because zoos are generally larger, have more investment, and operate on a wider scale and have a greater reach in accessing various animals its AALs who come out on top. So, I reject my initial hypothesis!

Evaluation:

Pro's

- Both zoos and AALs websites provided enough detailed information for my research
- There were a good variety of reptiles and amphibians across both zoos and AALs
- The Simpson's Biodiversity Index Calculator was effective for my research

Con's

- Contacting zoos was difficult using the telephone when conducting research

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- The number of zoos and AALs researched was small and if a larger number were researched it could have an impact on results
- Global research vs England only would also impact results

Future Work:

I would like to research and measure a larger number of zoos and AALs to show how the Simpson's Biodiversity Index Calculator would change and deliver new results. Exploring new ways of gathering information for my database will also help improve the quality of my measurements and results, for example visiting and conducting interviews.

Thank you and contact information:

Thank you for reading this report on the differences between Zoos and Non-Zoo Facilities. If you have any queries or questions on the research or this report, then please contact me using the below information.

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Email: education@reptileacademy.co.uk

Address:

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Manor Farm
Wimborne
Dorset BH21 5HT

References:

Tom's Talking Reptiles

<https://www.tomstalkingreptiles.co.uk/>

Chester Zoo

<https://www.chesterzoo.org/>

Telephone: 01244 380280

Animal Cwtch (AAL)

<https://animalcwtch.co.uk/>

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Living Things AAL

<https://www.living-things.co.uk/>

Marwell Zoo

<https://www.marwell.org.uk/>

Telephone: 01962 777407

Reptile Academy

<https://www.reptileacademy.co.uk/>

Telephone: 02380 394174

London Zoo

<https://www.londonzoo.org/>

Telephone: 0344 225 1826

Edinburgh Zoo

<https://www.edinburghzoo.org.uk/>

Telephone: 0131 314 0300