

Report Title: A summary on the life and work of Sir Arthur Tansley

Created by: Caroline Madden

Course Name: Biological Access Course

Course Units: Communication-Intermediate 2
Science and technology

Tutor: John O'Neill

Communication Lecturer: Mark Hetherington

Date of Submission: 25th May 2009

Reviewed by: _____

Review date: _____

Signature: _____

Contents	Page
Number	
(1) Introduction	1
(2) Sources of research	1
(2.1) Plan	1
(3) Findings of the investigation	1
(3.1) An overview of Sir Arthur Tansley	2
(3.2) An Investigation into the work and research of Sir Arthur	
Tansley 2- 4	
(3.3) The impact of Tansley's work on society	4
(4) Conclusion	5
(5) Evaluation	5
(6) Sign and date	5
(7) Bibliography	6
(8) Appendix	7

(1) Introduction

The following report has been created upon the request of John O'Neill and Mark Hetherington. Included in this report is a biographical account of the life and works of Sir Arthur Tansley. Supporting this is a written account of the influence that his work had on the world and the people in.








Included in this report is the investigation, specifically into the science of Ecology as this is the specialist area of Tansley's work and evaluates the benefits that have been developed following his work.

This report is to be submitted on the 25th May 2009 and presented to both John O'Neill and Mark Hetherington.

(2) Sources of Research

Information that has been gathered to form this report was obtained using a variety of sources such as the internet, a variety of books and journals.

(2.1) Plan

-  Identify topic and hero by 30th September 2008
-  Produce a brief outline plan by 28th October 2008
-  Produce an outline summary of project content of a maximum of 200 words by 25th November 2008
-  Refine summary for internet publishing by 17th February 2009
-  Complete investigative work and submit a first draft of report by 13th January 2009
-  Produce power point presentation by 3rd March 2009
-  Hand in final report by 25th May 2009

(3) Findings of the investigation

This section has been split up into three subsections. It will include information on Sir Arthur Tansley's life, work and impact on society.

(3.1) An Overview of Sir Arthur Tansley

Sir Arthur Tansley was born on 25th November 1871 and passed away in 1955 at the age of 84. He was a successful English botanist and was hugely influenced in his work by Danish Plant Ecologist, Eugenius Warming.

As well as being the editor of the *Journal of Ecology* for well over a decade, he found the time to become one of the founders of the '*British Ecological Society*'.

He also founded the '*New Phytologist*' in 1902 when he was only 30 years of age. In honour of his work, the '*New Phytologist*' which focused on Botany, publishes a specialised paper with every issue called '*The Tansley Review*'.

(3.2) An Investigation into the work and research of Sir Arthur Tansley

Although his main profession was as an Ecologist, he studied Psychology under Sigmund Freud in Vienna.

He published the book, '*The New Psychology and its relation to life*' in 1920. This publication bridged his two interests of Ecology and Psychology. His interest of Psychoanalysis assisted him in developing his personal philosophy of Ecological theory.

Tansley used his philosophy to interpret the evolution of animal and human populations of different climates, specifically The British Empire.

Although he found a passion in Psychology, specifically Psychoanalysis, he eventually reverted back to his first love of Botany.

Tansley has always acknowledged Eugenius Warming for forming the basis of modern plant Ecology. The books that he used towards his research were ones that focused on Ecological Plant Biogeography and on the physiological basis of plant biogeography.

He felt so strongly in his views that he fought for Botany to be added to the curriculum of English Universities. Tansley emphasised the importance of plant taxonomy and morphology. Through the assistance of his peers he managed to form the new functional Ecology that was formally sectioned into biogeography and plant sociology.

Due to his research he was a well-known name in the world of Ecology and is remembered as the man who created the term '*Ecosystem*' in 1935 and '*Ecotope*' in 1937 and the science behind it. (Appendix 1)

An ecosystem can be defined as;

'A community of all living things that are linked by energy and nutrient flows'

(<http://www.cathylaw.com/biology/vocabreview.html>)

These living things interact with each other even on the smallest level and with the physical environment.

Some Well-known Ecosystems include;

-  Rainforests
-  Deserts
-  Coral reefs
-  Grasslands
-  Marshes

Even though some ecosystems may appear that there are no living organisms, there are many that work on a microscopic level, unseen to the naked eye.

When Tansley was only 33 years old he defined Ecology and made a point of emphasising that;

'it was not an all inclusive study of any complex situation that involves different organisms'

He often used pollution as an example of his point. Tansley put forward the argument that;

'While the interaction of a pollinator with a flower is not Ecology, the adaptation of alpine flowers to special pollinators is.'

In Tansley's view, it is only Ecology when a condition of habitat is included. He summarised this as the *'topographic aspect of life'*.

The term *'Topographic Physiology'* is known today as *'Physiological Ecology.'*

(3.3) The impact of Tansley's work on society

'The British Ecological Society' was originally known as *'The British Vegetation Committee'* but evolved in 1913 with the help and support of Tansley. He was appointed its first president.

Following World War II, he was appointed onto the government committee which looked after and supervised the establishment of national nature reserves. His assistance helped create *'The Nature Conservancy'* in 1949. As well as being president of the council for *'The Promotion of Field Studies'* which is now *'The Field Studies Council'*, he became the Nature Conservation's first Chairman.

In his lifetime, Tansley published many books. *'The British Islands and their Vegetation'* published in 1939 covers his life's work and achievements. Another set of publications, *'Plant Ecology and the School'* published in 1946 and *'Britain's Green Mantle'* which was published in 1949 assisted in bringing Ecology to a wider audience instead of being specifically targeted at a niche market of scientists.

'He single-handedly bridges the biology in ecology with physics, chemistry and other fields of science that describe the environment'

(<http://juanlicon.com/ScienceHistory.html>)

(4) Conclusion

The findings from this investigation show that Sir Arthur Tansley's work and research has played a huge part in influencing the Ecology of this world. Through his persistence, he managed to infiltrate the education system and persuade them to accept Ecology as a certified science and included it into the curriculum.

Ecosystems play a huge role in the way in which our world works. Without its understanding, scientists may never have discovered the damage that humans are doing to their environment and more importantly, how to reverse it.

(5) Evaluation

I found that my investigation into the life and work of Sir Arthur Tansley was successful. Although I found my resources on books and articles somewhat limited, I was able to extract the information I needed for this report. I encountered problems with obtaining adequate information for my power point presentation. I successfully managed to meet every deadline outlined in my plan and managed to follow it systematically.

From this report I learnt how to structure a report and proof read so that the content came across in a formal yet understandable way. I learned to keep within a word limit and only add the essential information I needed to make the report meet the criteria and make sense.

(6) Sign and Date

Date: _____

Signature: _____

(7) Bibliography

Internet Sources

http://en.wikipedia.org/wiki/Arthur_Tansley

<http://www.newphytologist.org/tansley/default.htm>

<http://www.newphytologist.org/tansley/ecology1.htm>

Books Referenced

Tansley AG. 1949. Britain's Green Mantle

Articles Referenced

Tansley AG. 1913. A universal classification of plant communities (*Journal of Ecology*)

Tansley AG. 1904. The problems of ecology: research in British ecology. (*New Phytologist*)

(8) Appendix

Appendix 1

