biosciences outreach & engagement symposium

#BiosciencesForAll

@RoyalSocBio
Introduction

Professor Jeremy Pritchard FRSB
University of Birmingham

@RoyalSocBio | #BiosciencesForAll
Introduction

Professor Heather Widdows
University of Birmingham

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Engaging with local communities and hard to reach audiences

@RoyalSocBio | #BiosciencesForAll
Dr Sue Howarth FRSB
Royal Society of Biology
West Midlands branch

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Some Examples of Outreach Activities for Non-scientists That Worked Well

Dr Sue Howarth
Outreach and Engagement Symposium
University of Birmingham
14 November 2018
Why did this work well?

- Interactive
- Made a noise
- Made a mess
- Fun
- Had a genuine scientific link
- Works at different levels – simple to complex
Mini chocolate Easter eggs

Ruth Pratchett
Education Coordinator
Libraries – to reach communities
Melting chocolate
Why did this work well?

- Chocolate
- Free
- Heart of the community
- Fun
- See the science
- Local
- Stickers
- Inexpensive kit
- Chocolate
Cheltenham Summer 2018

The Cheese & Chilli Festival

Beth Anderson
Education Coordinator, South West
Sandford Park, Cheltenham
THE CHEMISTRY OF A CHILLI

CAPSAICINOIDS

CAPSAICIN

\[ \text{C}_{16}\text{H}_{19}\text{NO}_2 \]

DIHYDROCAPSAICIN

\[ \text{C}_{16}\text{H}_{19}\text{NO}_2 \]

The spiciness of chillis is due to the presence of compounds called capsaicinoids. The two compounds above are the main capsaicinoids in chilli peppers. They cause a burning sensation when they come into contact with mucous membranes, due to their interaction with pain and heat sensing neurons.

Capsaicin is also used in some brands of pepper spray, and studies have shown it may be capable of killing prostate and lung cancer cells. It is toxic in large quantities.

THE SCOVILLE HEAT INDEX

The Scoville scale is a taste detection based method for rating the heat of chilli peppers. A measured amount of pepper extract has sugar added to it incrementally until the heat is undetectable through taste. Though it is an imprecise method, it has been estimated that 1 unit corresponds to 18\(\mu\)M.
Curds
Whey
Why did this work well?

- Interactive
- Competitive
- Fun
- Appealed to all ages
- See the science
- Part of another event
- Encouraged use of scientific terms
To Make Outreach Work:

• Fun
• Interactive
• The science must be sound
• Ideas that people can relate to
• Going beyond science-related venues
• Extension / follow up material e.g. website on stickers
Championing an Advantaged Thinking approach, that focuses on young people’s potential, strengths and abilities.
WHY DO WE EXIST?

Did you know
Over 85,000 young people could not live at home last year?

Well we
Inspire those young people to realise their power and purpose through our national network of Foyers where they Live.Learn.Work.
Our Goals

That every young person can thrive with an opportunity to realise their power and purpose.

To see young people’s strengths, talent and value recognised by society.

That all young people, especially those who can’t live at home, get the same investment in their future as other young people.

That the concept of Foyers are promoted and championed in the UK.

That Foyers receive the support, quality assurance and accreditation they need to be sustainable entities and offer the best ‘deal’ to young people.
The Foyer Federation develops good practice and impactful services in Foyers through:

**Innovation**

**Quality development**

**Creating tools and delivering training**

Young People who could no longer live at home are:

- **Inspired, respected, involved and engaged**
- **Progressing and moving on**
- **Developing their talents, strengths and skills**

Young People are part of the Foyer Federation with their:

- **TALENTS** that can provide solutions
- **EXPERIENCES** to be drawn on
- **ENERGY** that spark change

Foyers offer young people:

- **LIVE**
  - A good place to live
- **LEARN**
  - A learning offer that builds confidence and skills
- **WORK**
  - Access to relevant work opportunities

Advantaged Thinking
YOUNG PEOPLE IN FOYERS

- Suffered parental abuse: 18% in 2010, 35% in 2016
- Care leavers: 10% in 2010, 20% in 2016
- History of school exclusion: 11% in 2010, 23% in 2016
THE FOYER APPROACH

Health: fitness, food and mental health

Provide a home and moving on support

Financial management support

Support Personal development

Learning: A wide range of learning and life skill development.

Employment and enterprise experiences, volunteer and apprentice experiences.

Develop Social Skills
**OUR MEMBERS**

Over 5,000 young people supported each year (45% are female)

70+ Foyer Across the UK

<table>
<thead>
<tr>
<th>North West</th>
<th>North East</th>
<th>Midlands</th>
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<tbody>
<tr>
<td>Birkenhead</td>
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<th>Ireland</th>
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<th>South East</th>
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Every Foyer had a youth-led business incorporated and the Foyer Federation provided business advice and enterprise tools.

Foyers weren’t seen as homeless projects anymore?

Foyers were interactive spaces for the local community?

The connecting thread for all Foyers was not supported housing but youth enterprise?
THE FUTURE OF FOYERS

Examples

Sanctuary housing work and life

St Basils Live & Work Scheme

Help Bristol’s Homeless

Y:Cube

A HOME AND A JOB FOR YOUNG PEOPLE

LIVE & WORK SCHEME
Natasha, age 28, Sheffield Foyer, North East England

Natasha got into some financial difficulty after a strained relationship with family and her mum had passed away from cancer when she was a teenager.

She started living in a Foyer in early 2013 and after telling a friend she wanted to start boxing, the Foyer helped her get the equipment she needed.

Natasha worked so hard at her boxing career that in less than 5 years she made it into the Great Britain Boxing Team.

---

Natasha’s future
She has won numerous national titles, will represent Great Britain at the Commonwealth Games, Worlds and Olympics and is currently the female 75kg European Champion.
Kyle, age 25, Quay foyer, South West England

After the relationship with his family broke down, Kyle came to Quay Foyer seeking independence and support to develop. Kyle left the Foyer after two years to join the army. After a while, Kyle left the army and his circumstances kept changing, with poor mental health resulting in suicide attempts and recurring homelessness.

He came back to the Foyer, knowing it to be a supportive place. After successfully moving on from the Foyer a second time, Kyle broke his collar bone, which led to him losing his job and becoming homeless.

Returning to the Foyer a third time, Kyle began working and rebuilding his independence with personalised support from staff, ultimately becoming a Foyer Ambassador by helping deliver activities and peer mentoring others.

Kyle’s future
Now with his own flat, he visits the Foyer weekly, as part of his apprenticeship, meeting residents, providing 1-1 support and coordinating activities.
Ahmed, Weston Foyer, South West England
Ahmed came to the UK after fleeing Eritrea and moved into the Foyer in August 2016. The Foyer provided him with a sense of safety and stability where he has been able to build relationships and embrace opportunities to develop himself.

He quickly proved to be a considerate, giving and hard-working resident and has gone out of his way to support the three other asylum seekers living at the service. Despite the real struggles they have experienced, each of the resident asylum seekers are attending college and trying to make the most of the opportunity, whilst it is available to them, to improve their situation and build a future - a lot of this is thanks to Ahmed helping them integrate.

Ahmed’s future
In July 2017 Ahmed learned his request for asylum has been granted, giving him security, stability and the chance to look to the future in a calmer environment. In September, Ahmed will start another year at Bristol College, where he studies IT, having already completed a course in English. To Ahmed the Foyer is his family.
To join more young people and us on our journey, please contact:

Alieu Fofanah  
Head of Partnerships  
Email: alieu@foyer.net  
Mobile: 07940 309 843
Basildon, Essex
BME Community
Workshop and events for parents and kids
At least you will be pleased to know that you're making an impact on the kids! [Redacted] has always been into Law but after yesterday said she's thinking about engineering!

17:09

Thank you [Redacted] said I should thank you because it was really good. And that was his first time on virgin train

22:02
COMMUNITY EVENTS
Hephzi Angela Tagoe

hephziangela@ghscientific.com

twitter/instagram: @hanat_akordor
Jean Wilson MBE CBiol FR SB
Royal Society of Biology
North Western branch

@RoyalSocBio | #BiosciencesForAll
Community Engagement
North Western Branch

Jean Wilson MBE C.Biol FRSB
Partnership Engagement

ICI Hillhouse
Brinewatch
Churchtown Flood Action Group
Event Organisation

Funding:

• Royal Society of Biology
  • Additional Branch funding
• Wyre Council
• Wyre Rivers Trust
• Match Funding
The Specialists
Marketing
Educational Engagement

<table>
<thead>
<tr>
<th>Activities</th>
<th>Times</th>
<th>10.45</th>
<th>11.45</th>
<th>12.30</th>
<th>13.30</th>
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<tbody>
<tr>
<td>RSB Owl Pellet Dissection</td>
<td>11.45</td>
<td>A</td>
<td></td>
<td>C</td>
<td>E</td>
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<tr>
<td>Wood Craft Bird Boxes etc...</td>
<td>12.30</td>
<td></td>
<td></td>
<td>D</td>
<td>F</td>
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<tr>
<td>Painting from Nature</td>
<td>13.30</td>
<td>C</td>
<td></td>
<td>E</td>
<td>A</td>
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<tr>
<td>SEALIFE Sharks</td>
<td>14.30</td>
<td>D</td>
<td></td>
<td>F</td>
<td>B</td>
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<tr>
<td>Small Mammal Trapping and Wildlife Photography</td>
<td>15.30</td>
<td>E</td>
<td></td>
<td>A</td>
<td>C</td>
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<tr>
<td>Nature Walk</td>
<td></td>
<td>F</td>
<td></td>
<td>B</td>
<td>D</td>
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BioBlitz: Friday June 22\textsuperscript{nd} 2018. SCHOOLS’ Timetable

Six School Group A, B, C, D, E, F
Nature Walk
SeaLife Blackpool
Making Bug Hotels and Bird Boxes
Wildlife Photography
Owl Pellets
Painting from Nature
# Community Engagement

## 24 hour Biolitc Walks

**June 2018**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Leader</th>
<th>Co-leader</th>
<th>Co-leader</th>
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<tbody>
<tr>
<td><strong>Friday 22nd</strong></td>
<td></td>
<td>School Activities in Mangrove</td>
<td>Stanah</td>
<td>Jean Wilson</td>
<td>Amy Clayton</td>
<td>Keith Urwin and other groups</td>
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<tr>
<td>11:00-14:30</td>
<td></td>
<td>Opening Event</td>
<td>Stanah</td>
<td>Jean Wilson</td>
<td>Alison Boden</td>
<td>ALL</td>
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<tr>
<td>15:00-16:00</td>
<td></td>
<td>Salt Marsh Survey</td>
<td>Stanah</td>
<td>Jean Wilson</td>
<td>Jennifer Sharple</td>
<td>Kath Lowe</td>
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<td>19:00-20:00</td>
<td></td>
<td>Evening Bird Walk</td>
<td>Stanah</td>
<td>Ian Coote</td>
<td>Mark Farrah</td>
<td>Amy Clayton</td>
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<tr>
<td>20:00-21:00</td>
<td></td>
<td>Retrieval of Fyke Nets</td>
<td>Stanah</td>
<td>Tom Mersough &amp; Steve Brown</td>
<td>Alison Boden</td>
<td>Kath Lowe</td>
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<td>22:00-23:00</td>
<td></td>
<td>Bat Walk</td>
<td>Stanah</td>
<td>Charlie Pass</td>
<td>Karen Lawson</td>
<td>Charlie Pass</td>
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<td>23:00-00:30</td>
<td></td>
<td>Set up Moth Traps</td>
<td>Stanah</td>
<td>Karen Lawson</td>
<td>Charlie Pass</td>
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<th>Location</th>
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<th>Co-leader</th>
<th>Co-leader</th>
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<tr>
<td><strong>Saturday 23rd</strong></td>
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<td>Biolitic Activities in Mangrove</td>
<td>Stanah</td>
<td>All Exhibitors</td>
<td>Amy Clayton</td>
<td>Allison Boden</td>
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<td>05:00-07:00</td>
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<td>Early Morning Survey</td>
<td>Stanah</td>
<td>Josh Swales</td>
<td>Amy Clayton</td>
<td>Allison Boden</td>
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<td>07:00-08:30</td>
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<td>High Tide Bird Walk</td>
<td>Rossell Point</td>
<td>Ian Coote</td>
<td>Mark Farrah</td>
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<td>08:00 - 8:30</td>
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<td>Moth trap checking</td>
<td>Stanah</td>
<td>Karen Lawson</td>
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<tr>
<td>08:00 - 8:30</td>
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<td>Mammal trap checking</td>
<td>Stanah - Outdoor Classroom</td>
<td>Alan Bedford</td>
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<td>09:30-12:00</td>
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<td>Wildflower Survey</td>
<td>Stanah</td>
<td>Graeme Nuttall</td>
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<td>10:00-11:00</td>
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<td>Woodland Bird Survey</td>
<td>Stanah</td>
<td>Ian Coote</td>
<td>Mark Farrah</td>
<td>Amy Clayton</td>
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<td>11:00-12:00</td>
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<td>Butterfly Survey</td>
<td>Stanah - Outdoor Classroom</td>
<td>Karen Lawson</td>
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<td>13:00-14:00</td>
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<td>Butterfly and Moth ID</td>
<td>Stanah</td>
<td>Karen Lawson</td>
<td>Charlie Pass</td>
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<tr>
<td>13:00-14:00</td>
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<td>Mud Rescue</td>
<td>Stanah</td>
<td>John Bradbury</td>
<td>Dave Eccles</td>
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<td>13:00-15:00</td>
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<td>Small Mammals ID</td>
<td>Stanah - Outdoor Classroom</td>
<td>Mike Clapham</td>
<td>Alan Bedford</td>
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<td>15:00-15:30</td>
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<td>Closing Ceremony</td>
<td>Stanah</td>
<td>Alison Boden</td>
<td>Jean Wilson</td>
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Healthy Heroes & Health Checks
Nature Walks and Surveys
Nature and Art
Recordings and Surveys
Summary

- 700+ species identified and confirmed
- 100 Bird boxes and Bug hotels constructed
- 80 school children
- 1000+ visitors on 23/06/18

Royal Society of Biology
The ‘Jean’ Pool

Royal Society of Biology