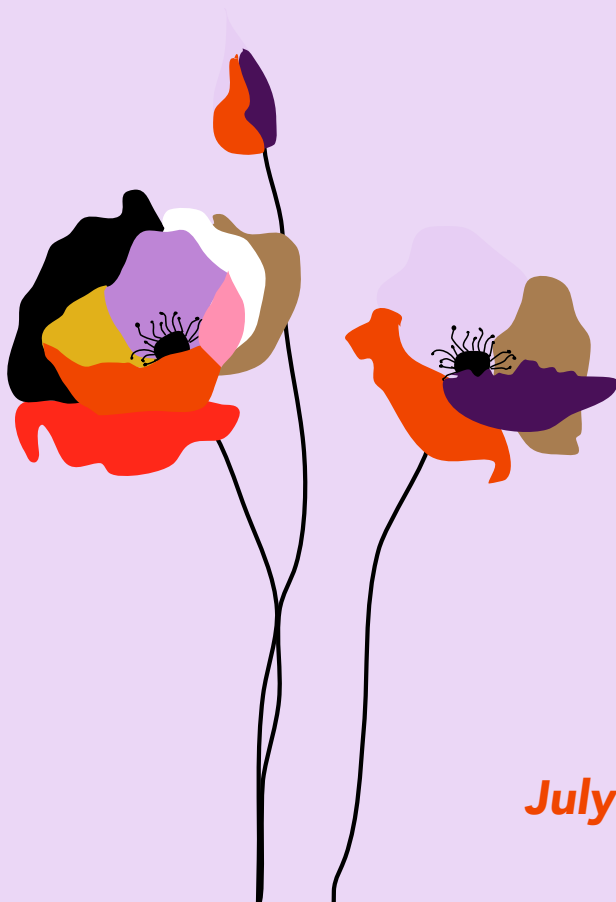


Decolonising the curriculum: *a guide for APS*



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Decolonising the Science Curriculum

We formed a departmental working group in 2019 to look at what decolonising the curriculum means for us, and how we can use this approach to improve our teaching and research. Below we explain some of the key issues involved. We'll be collaborating with teachers and students during the academic year 2020-21 to start implementing the necessary changes across the modules we teach.

If you want to get more directly involved in the department's decolonising work as a student or staff member, please email Colin Osborne at c.p.osborne@sheffield.ac.uk.





1.1 What does decolonisation mean?

Decolonisation is broadly about confronting how European imperialism, colonialism, and racism have shaped our modern world. It is a framework that helps to tackle racial injustice - but more than that, it seeks to interrogate and tear down the structures that embed racism in our society. For us, as academics and students working in a UK university, this starts with acknowledging and reflecting on the whiteness and Eurocentrism of our science.

UK science is inherently white, since the discipline developed from the European scientific enlightenment. Crucially, science was both a fundamental contributor to European imperialism and a major beneficiary of its injustices. When viewed in this way, it is clear that science cannot be objective and apolitical – it is produced within society by individuals who cannot escape the influences of contemporary culture, society and politics. Decolonisation of the curriculum seeks to explicitly recognise these problematic issues as part of the science we teach and practice, and aims to include a range of non-Western perspectives.

In making these changes, decolonisation presents an alternative vision for science, which adopts a wider view of the world and explicitly avoids an exclusive focus on the present and past European influence.

1.2 What will decolonising the curriculum involve?

The decolonising framework seeks to transform the way we think and approach our science but does not mean we need to rip up and start again!

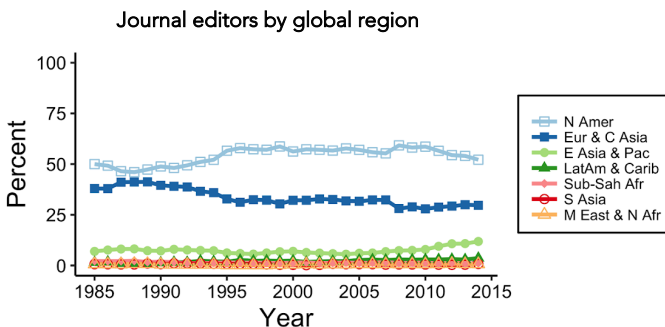
Decolonisation should be a process of constant ongoing discussion and reflection. It involves:

- Confronting the historical roles of European science in racism and the injustices of colonisation, and how modern science perpetuates these injustices.
- Acknowledging that the science we teach is white and takes a Eurocentric viewpoint, explaining where that comes from and what problems it creates.
- Diversifying the perspectives taught, and value the perspectives and world views that minorities and non-Westerners bring to science.
- Empowering students and staff to understand their own positionality (the social and political context that shapes your views, actions and biases) and reflect on their science through a critical decolonial lens.


1.3 Why is it important for us to decolonise our curriculum?

Colonisation is perpetuated in academia by the imbalance of power and wealth between universities in the Global North and those in the Global South. Historically, Western universities have been financed through colonial plunder and enslavement, and the modern practice, language, and publication of science continues to be under Western control.

Western universities are generally considered to be the most legitimate and respected sites of knowledge production, with Western universities and publishers acting as gatekeepers that determine what and whose knowledge, history, and intellectual contribution is valuable. In the US potential peer-reviewers automatically associate science from low-income countries as being of lower quality, while science from high-income countries is assumed to be high quality (1). In the UK, BAME scientists are half as likely to have their grants funded and received smaller amounts than their white peers (2). And broadly, science which does seek to interweave Traditional Ecological Knowledge into its methodologies is rejected as it does not fit into the western framework (3).



From Espin et al. 2017. A persistent lack of international representation on editorial boards in environmental biology



This power allows Western institutions to shape public discourse and dictate the status quo, thereby spreading European ways of knowing and seeing the world, and erasing, suppressing or ignoring other perspectives.

Ultimately, this dominance has led to colonial theories of racism, white superiority, civilisation, and capitalism. In order for UK science to broaden its intellectual vision to incorporate the rich array of perspectives that have built our discipline, we must acknowledge, confront, and begin to rectify these issues.

“OK, but does all this really apply to me?”

At this point it is common to question whether this work applies to us or is for us to do. Here are some responses to common reactions that we found helpful...

"I'm a good person, I'm doing my best, and my intentions are good – why should I feel bad about the past"

The concept of being Good or Bad misses the point. Well meaning people can cause harm unknowingly. The point is not to assign blame and guilt, the point is to acknowledge the messy and uncomfortable situation so we can understand how it influences the present and move forward together.

"I don't know enough and I don't want to offend! Can I find someone who identifies as a minority to cover this topic?"

Ignorance is not a sufficient excuse; one does not have to identify as a minority group to understand how colonial structures that permeate Higher Education. Choosing to remain ignorant also shifts responsibility back to those already at a disadvantage, adds to their (mental/emotional) load, and may further marginalise them. Further, those who identify as minorities should not be seen as representatives of their peoples (white people certainly aren't!) and expected to teach about decolonisation. There are readily available resources on anti-oppressive pedagogies, how to structure courses, engage learners etc. This is this a collective problem which we can tackle as a community.

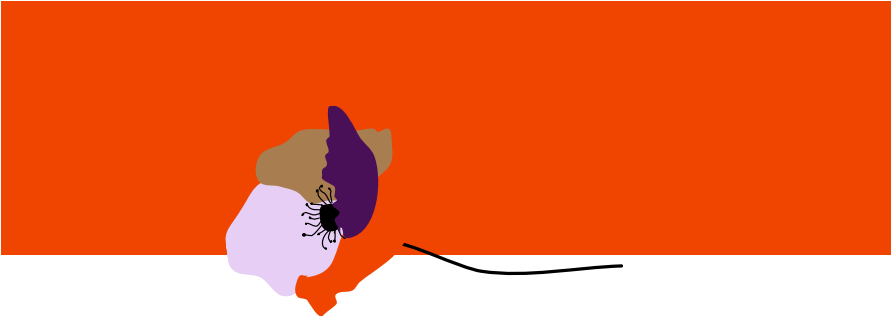
"I don't want to be political / bring politics into my science"

Science is not objective or apolitical. Concepts like 'inclusion' or 'equality' have been co-opted and made 'neutral' such that they do not address structural causes, hence the need to examine how current systems and institutions continue to oppress and marginalise minorities.

"I don't think there is a problem here. I haven't oppressed anyone and its not my fault I was born here, and I worked hard for what I have"

The concept of decolonising presents a challenge to our identity, so a common reaction is to deny that the problem exist and thus avoid this challenge. It feels good to have a positive narrative about ourselves, our nation, our history. Confronting our own complicity in perpetuating colonial legacies challenges this narrative and everyone, even the most committed anti-racist – will feel the instinct to become defensive. Our brain wishes to protect us, to assert our innocence and deflect our privileged identity by disowning or downplaying our identity, distancing ourselves from colonial events, being unwilling to see how the past leads to the present, or tokenising minorities etc.

Decolonisation is unsettling and uncomfortable but also incredibly rewarding. Talk to your colleagues, join a reading group to work through ideas. Allow yourself time to question your instinctive reactions and listen and empathise with the perspectives of others. It isn't something we each need to do alone




2. Where do I start?

Now is the ideal time to begin decolonising the curriculum in APS. In light of recent high-profile cases of racial injustice in the media, and growing support for the Black Lives Matter movement, our students [are demanding](#) and deserve these changes. We must take the opportunity to integrate them into the larger shifts in our teaching content and approach that are already taking place as we engage with the Biologies Teaching Partnership.

2.1 General guidance for teaching content

- Present a balanced & informed history of the topic you teach, including thorough context for key players in the field (e.g. who they were and what it was about them/the political climate at the time that shaped their thinking).
- Acknowledge all the contributions to an idea or discovery and avoid 'hero worshipping' single people and using terms such as "founding father" or presenting individuals as a "white saviour".

- 
- Self-audit your modules to reflect on whose research you talk about. Whose names do you mention? Do you present a diverse picture of scientists and other contributors to the field? If possible, add photos of researchers whose work you discuss to provide visual evidence for your students of diversity in the field.
 - Ensure you include diverse perspectives on the field, and review your content each year to include recent advances and new perspectives. Actively seek out and include work by research groups that are not from the UK/US, thereby introducing students to excellent work being produced in other parts of the world.
 - Think critically about power relations between Global South and North in the content you teach (e.g. the global market economy perpetuates colonial power relations in agriculture).
 - Avoid perpetuating harmful stereotypes and narratives in the examples you provide (e.g. presenting Africans as starving).
 - Introduce indigenous perspectives into field course teaching. (e.g. Saami perspectives on landscape management and change around Abisko).
 - In tutorials and level 3 'issues in' modules, include discussions about papers concerned with anti-racism and decolonisation within your subject area.
 - Engage positively with students and other stakeholders who help develop content. We have established a group of undergraduates to identify problematic areas in the curriculum. Any suggestions or criticisms made of lecture content should not be seen as condemnation but as an opportunity to address something that has been missed.

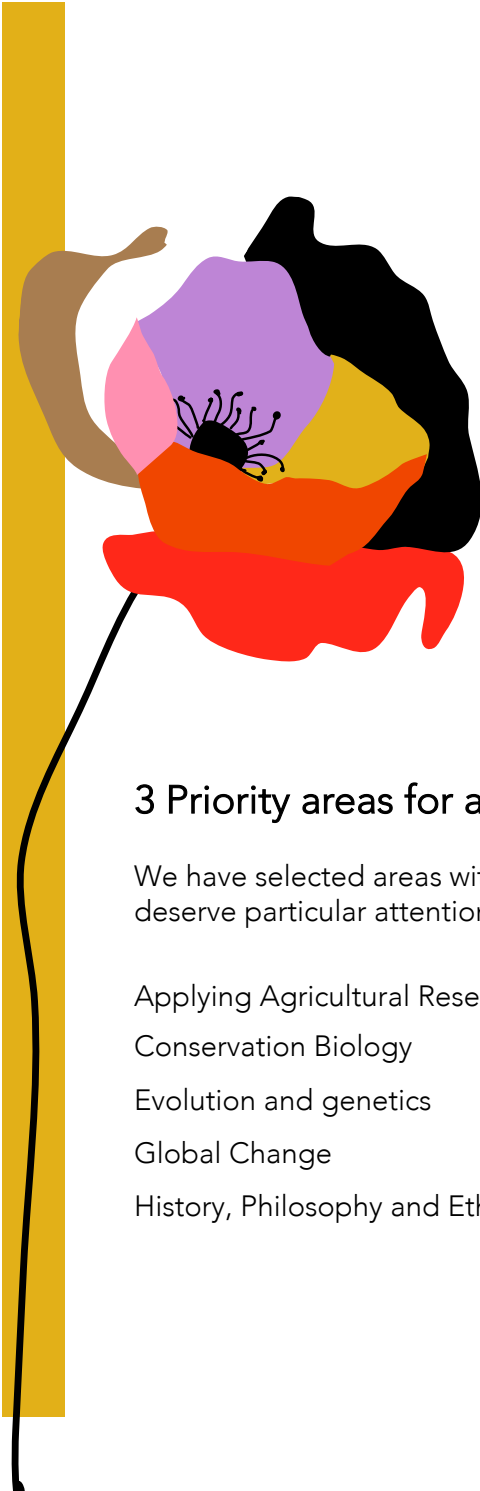
2.2 General guidance for your own research

- Lead conversations, for instance through journal clubs or lab meetings, to discuss these ideas and how they relate to your work.
- When developing collaborations with partners from the Global South, take time to understand what questions your partners are interested in, rather than pushing an agenda from Global North. Is the collaboration truly a partnership?
- In working with partners in the Global South, reflect on the power dynamics. If you're honest with yourself, are you using your partners as cheap and convenient data collectors, or is it a collaboration of equals, in which work is acknowledged fairly and credit shared appropriately?
- Consider actively integrating the philosophy of decolonising science into your training, for example including a chapter or reflection in your PhD thesis or conducting a research project addressing how these topics impact your field.
- Question who are you choosing who to cite. Science publications are heavily skewed towards Western institutions and white scientists. Following such bias through the stages of funding, publication and citation, it is easy to see how small unconscious biases are amplified through our publication system. Remember to judge the quality of science on the science and not on the journal or institute.

*Let us know what
changes you
have made!*

These can be shared as examples of best practice and allow us to chart progress in the department

details to follow soon



3 Priority areas for attention

We have selected areas within each cluster and beyond that deserve particular attention

Applying Agricultural Research

Conservation Biology

Evolution and genetics

Global Change

History, Philosophy and Ethics of Science

Agricultural Research

Agricultural science has brought amazing innovation, but suffers when research fails to consider the needs and desires of the communities it seeks to benefit. The requirements of potential stakeholders, let alone their extensive expertise and knowledge, too often become an afterthought in the research pipeline, leading to a failure of implementation. Furthermore, by making assumptions of need based on our own Western perspectives and prioritising academic over local forms of knowledge, we are missing out on opportunities for forms of innovation that we are unable to reach from within the academic space.

One example of this is GMO 'Golden Rice', touted as the end to vitamin A deficiency across Africa and Asia. As one of the most important global crops - with huge cultural significance - the introduction of a new, edited form of rice has thus been hugely controversial and divisive. Whilst well intentioned, the concept of engineering a single type of rice for use across the diverse ecosystems and cultures of the global south, to fix a complex issue such as nutritional need exemplifies the pitfalls of reductionist approaches proposed and implemented through Western institutions. While millions of dollars have been spent over many decades on this project, the production and distribution of this GMO has been largely prevented by regulatory frameworks, and cultural and societal resistance from target countries.

Embedding true collaboration into applied science from its inception has myriad benefits; gaining alternative perspectives on need, diversifying our knowledge by integrating non academic knowledge, and improving the relationship between scientists and stakeholders.

Conservation Biology

Colonial narratives continue to play important roles in shaping ecological systems. For example, the designation of protected areas around the world (mostly in former colonies) perpetuates the concept of 'wilderness', shaping lands and how they are used in the Global South. In creating these protected areas, people may be forcibly displaced from their homelands (e.g. 26 Native American tribes were displaced to create Yellowstone National Park in the USA in 1872, while Adivasis were forced to leave the Achanakmar Tiger Reserve, India in 2017).

The concepts of 'wilderness' and 'wasteland' created by Western colonialists originally implied land unsuited for civilised humans where (uncivilised) Indigenous people lived. This later shifted to represent areas untouched by human activity, disregarding the presence of Indigenous peoples. These ideas were reinforced by notions of unproductive lands needing to be improved and made productive (i.e. turning a profit for colonisers), and legitimised dispossession of Indigenous communities and colonisation. The continued use of 'wilderness' concept negates the existence and contributions of Indigenous communities, and perpetuates notions of Western superiority and supremacy of science by reinforcing Western ways of seeing and knowing the world.

Furthermore, misclassification of biomes by colonisers has resulted in the mismanagement of ecosystems. Through this mechanism, the legacy of colonisation remains with us today. e.g. in India, tropical grasslands are classified as degraded ecosystems, while woody savannas are misclassified as dry deciduous forests. This misclassification legitimises tree planting in ancient grasslands and fire suppression in savannas. Similar issues arise over rewilding in Canada, where settler perspectives of wilderness contrast with those of Indigenous peoples.



Evolution and Genetics

The history of evolutionary biology and genetics is entwined with European imperialism, racism, and white supremacy. Many prominent evolutionary biologists and geneticists who helped establish the field were racists and eugenicists, including JBS Haldane, Francis Galton, James Crick and many more. Their theories served as justification for slavery and mass slaughter. Today they should serve as a painful lesson in just how unobjective 'science' is capable of being. The curriculum we teach must confront these issues and acknowledge how colonialism has shaped the field of evolutionary biology and how evolutionary biologists think today. We recommend paying particular attention to the following areas:

- History of population genetics and eugenics
- Human genetics and race
- Sex versus gender
- Sociobiology and naturalising racism

Global Change

It is important to frame global environmental problems in the context of climate justice, since people on Earth are not all equally culpable for 'key environmental challenges'. Western powers have taken an unequal share of the carbon budget and resource extraction, and still own the majority of global extractive companies (petroleum corporations, cement, mining etc). Conversely, the impacts of climate change are felt most keenly in the Global South, such that those most badly affected did not cause the problems they experience.

Colonisation also played a central role at the beginning of the Anthropocene, since it enabled European imperial powers to exploit natural resources and people in the Global South. The wealth acquired was an important underpinning for the Industrial Revolution. This power imbalance is perpetuated today through globalised companies, economies and trade networks, which enable natural resources to be acquired from the Global South in order to supply consumption in the Global North.

This issue of justice comes to the fore in the neocolonial forest and landscape restoration (FLR) agenda. Here, sustainable development in the Global South is used as a mechanism to address "global problems" (especially climate change) for which the Global North is largely culpable. While deforested landscapes are normalised across Europe and North America, Western economies fund tree planting schemes across the Global South. For example, the AFR100 initiative to promote tree planting for climate change mitigation across Africa.

History, Philosophy and Ethics of Science

Science is not objective and apolitical. It is produced within society by individuals who cannot escape the influences of contemporary culture, society and politics. We should be upfront about these issues in our teaching and research. What's more we must avoid perpetuating the idea that individual 'idols' or 'geniuses' are solely responsible for major scientific advances, which typically serves to purge science history of the already limited diversity of minds who have shaped it. There are several ways we can begin to do this:

- Value diversity in epistemology (ways of knowing), by realising that science stems from a Western positivist perspective which is just one of many equally valid ways of understanding the world and addressing contemporary problems.
- Highlight the importance of social sciences for understanding the wider social, political, and cultural implications of biological science research.
- Recognise the problematic aspects of history within our own fields. Many highly celebrated scientific figures held racist views (e.g. Fisher, Hardin, Watson, Malthus, Linnaeus, Fossey; see also below) which influenced the type of research they carried out and how they interpreted their data.
- Acknowledge that science is not truly objective and that we cannot help but bring our societal influences, opinions and perspectives into our work. Upholding the comfortable myth of true objectivity in science prevents us from working to mitigate our own biases and question those of others.



Natural History Collections and Taxonomy

Many museums have legacies rooted in colonialism. Their collections are largely the result of usually wealthy Western explorers going to far-flung places (colonies) and acquiring knowledge and specimens. When we use museum collections in our research, we benefit from their colonial past. Part of our work must therefore be to confront and explore the complex histories of the collections we use and acknowledge the colonial narratives underpinning them when we disseminate our research.

In the current day, the tendency for Western scientists to describe 'newly discovered' species, which have in fact been known to and used by Indigenous peoples for generations, amounts to misappropriation of knowledge (without credit). Species are typically named using European language, sometimes after the Western researchers who reported them (or other people who the researchers admire). Some (bioprospectors, pharmaceutical companies) even commodify and patent these species/knowledges with little benefit to the local community. These actions are a form of modern-day colonialism and should be critically reflected upon by the academic community.

4. Useful resources for decolonising

4.1 Problematic key figures in science

Fisher: believed that races differed “[in their innate capacity for intellectual and emotional development](#).” Member of Cambridge Eugenics Society, later became professor in the Eugenics department at University College London. His work “[The Genetical Theory of Natural Selection](#)” endorses colonialism, white supremacy, and eugenics and discusses his belief in the higher and lower genetic value of people according to their race. See: <https://njoselson.github.io/Fisher-Pearson/>

Linnaeus: applied his system of classification to position human races, with white Europeans at the top, and BIPOC groups gradually descending his hierarchy. See: Marks, J. Long shadow of Linnaeus's human taxonomy. *Nature* 447, 28 (2007). <https://doi.org/10.1038/447028a>

James Watson (of Watson and Crick): has made outwardly racist public comments about the innate inequality of people from different races, particularly with regards to intelligence. [Article in the Independent summing up his most controversial statements](#). Because of these views, he was suspended and forced to resign from his position as Chancellor of Cold Spring Harbor Laboratory.

Thomas Henry Huxley: published research on the classifications of races, see https://www.jstor.org/stable/3014371#metadata_info_tab_contents. This problematic field of research was later used as justification for segregation. Huxley also [published](#) his belief that “no rational man, cognizant of the facts, believes, that the average negro is the equal, still less the superior, of the average white man”.

Francis Galton: invented the term eugenics, published extensively in the field and established the Galton Laboratory for National Eugenics in 1904. He was obsessed with a eugenic “utopia” in which the genetic elite were encouraged to breed, segregated from the sterilised underclass. It has been [said](#) that his work “invented racism”.

Karl Pearson: succeeded Galton as the director of the Galton Laboratory of National Eugenics, he believed strongly in racial segregation and that races other than his own were inferior.

Charles Darwin: sailed on the HMS Beagle, the purpose of the voyage was to map the coastline of South America and the Falkland and Galapagos islands in order to strengthen the British colonial control of these areas. He believed that his theory of natural selection justified the view that the white race was superior to others, and used his theory of sexual selection to justify why women were clearly inferior to men. See <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2672903/>

Alfred Russell Wallace: carried out all of his field observations in a colonial environment and, similar to the “the Wallace line”, drew a boundary line between what he classified as different ethnic groups in the colonial Dutch East Indies. See: <https://www.jstor.org/stable/4331991?seq=1>

Henry Walter Bates: travelled and collected specimens from colonial South America and was a [proponent of colonialism in the Amazon](#).


Julian Huxley: was a prominent figure in British Eugenics Society and [believed that the lower classes were genetically inferior and should be prevented from reproducing and even sterilised](#). (In contrast, he was a strong critic of Nazi race-theory and published several anti-racist pieces, most notably “We Europeans”.)

JBS Haldane: published a [book](#) in 1924 describing the use of *in vitro* fertilisation for eugenics purposes.

4.2 Overlooked/excluded individuals in science

Note: these are just some examples of people whose names and work are not commonly included in undergraduate curricula. It is not a comprehensive list. We include white women scientists whose significant scientific contributions have been overlooked, as well as scientists of colour. It is important to recognise that while the contributions of those of this list have been undervalued, they were at least able to participate professionally in science. The list cannot, of course, include the many talented scientists for whom strong discrimination at an early stage prevented them from pursuing a professional scientific career and publishing/presenting their work. This relates to the concept of “undone science”, typically used to describe areas of research that are unfunded or ignored, but that we believe can be extended to include scientists whose ideas were never able to flourish or gain traction due to their exclusion from mainstream science.


Charles Henry Turner: his research was centred on animal behaviour, and he is perhaps best known for his discovery that insects can hear. He also showed that honeybees could recognise colours and patterns. He “published more than 70 papers in fields as diverse as avian morphology, natural history, insect navigation, education and civil rights — including the first paper by an African American in *Science* (C. H. Turner *Science* 19, 16–17; 1892). Unable to secure an academic job despite his publication record, Turner did most of his research while teaching on the meagre salary paid in African American high schools (W. S. Savage *J. Negro Hist.* 22, 335–344; 1937), without proper lab facilities, a library or graduate students.” Taken from Abramson, C. Charles Henry Turner remembered. *Nature* 542, 31 (2017). <https://doi.org/10.1038/542031d>



Ernest Everett Just: conducted important research in cell and developmental biology of marine invertebrates. As an African American scholar he struggled to secure employment at a US university and relocated to Europe to continue his career. Despite Just's reputation as an outstanding scientist he was never allowed to hold an appointment at a premier research university in the United States. There is some indication that Just was thinking about evolutionary problems, as before his death he was working on a paper entitled: "Ethics and the struggle for existence" but he died before completing this manuscript.

Eunice Foote: presented a paper at the annual meeting of the American Association for the Advancement of Science, which demonstrated the effect of the sun's rays on different gases, including carbonic acid, and theorised that this had taken place in the Earth's atmosphere to affect its climate. As a woman, Foote had not been permitted to read her own paper; it was read for her by Professor Joseph Henry of the Smithsonian Institution, who started by protesting that science should not discriminate on the grounds of gender. But it was nonetheless the case that Foote's paper was not widely published and after its reading, she vanished into obscurity. The discovery of the greenhouse effect is usually credited to Irish physicist John Tyndall (1859), who published results three years after Foote's work was presented, demonstrating that gases such as carbonic acid trapped heat, and that this effect could and did take place in the Earth's atmosphere, contributing to a changing climate over time.


George Washington Carver: Agricultural scientist born (1864) into slavery. He developed hundreds of commercial uses for alternative crops to cotton, such as peanuts, soybeans and sweet potatoes. He became an agricultural adviser to President Roosevelt and one of the few American members of the British Royal Society of Arts.



Jean-Jacques Muyembe Tamfum: was the first scientist to characterise Ebola while working as a field epidemiologist during an outbreak, but the white, Western scientists who worked on the blood samples he sent them were credited with the discovery. He has since developed public health measures and clinical treatments for the disease, and now leads the national response to outbreaks in the DRC. See [here](#) and [here](#) for more info.

Muriel Wheldale Onslow: a British biochemist known for her study of the inheritance of flower color in the common snapdragon (*Antirrhinum majus*), which contributed to the foundation of modern genetics. While at the Balfour Biological Laboratory for Women at the University of Cambridge, she worked with William Bateson. From her experiments with crossing plants of different flower color, Wheldale demonstrated that traits are inherited by offspring in specific proportions, thereby affirming Gregor Mendel's (so far overlooked) theory of inheritance. She reported her landmark findings in 1907 in a paper titled "The Inheritance of Flower Colour in *Antirrhinum majus*." She also conducted insightful research on the biochemistry of pigment molecules in plants.

Nettie Stevens: first discovered sex chromosomes in 1905, after noting in mealworms that male cells carried one chromosome smaller than the rest, whereas female cells carried all equally sized chromosomes. Edmund Beecher Wilson, Stevens' colleague, is more often credited with the discovery. He did publish first, but this may have been only after seeing Stevens' results. Wilson also thought that environmental factors were involved in sex determination, while Stevens correctly identified that it was solely down to chromosomes.



Roger Arliner Young: the first African American woman to receive a doctorate degree in zoology in 1940. She studied the effects of direct and indirect radiation on sea urchin eggs, on the structures that control the salt concentration in paramecium, as well as hydration and dehydration of living cells, and was the first African American to publish professionally in this field. Prior to obtaining her doctorate, she did not achieve high grades in early education and struggled to obtain funding for Masters and doctoral study. Young assisted Ernest Everett Just in his research at Howard University from 1927 through 1930, but although her assistance was noted in his grant applications, her name does not appear as a coauthor in the resulting publications.

Rosalind Franklin: a chemist, X-ray crystallographer and leading molecular biologist who discovered the structure of DNA. Her most critical work was capturing an image of the DNA molecule's structure. Francis Crick and James Watson used her research to publish their double helix theory of DNA structure. Franklin published her work shortly after Watson & Crick, but it was largely dismissed as confirmation of her male colleagues' discovery. Franklin died from ovarian cancer at 37, never knowing her research was stolen. Four years later, Maurice Wilkins, Crick and Watson received the Nobel Prize for the double helix theory of DNA. Watson later authored the book, *The Double Helix*, in which he continued to credit himself and his male colleagues for their discovery and described Franklin as an antagonistic and overly emotional woman.

4.3 Resources and potential material for course reading list

Published papers

General

Sheth 2019 [Grappling with racism as foundational practice of science teaching](#). *Science Education* 103: 37-60.

Wynn-Grant 2019 [On scientific reporting and racial history](#) *Science* 365(6459), 1256-1257.

Evolutionary Biology

Graves 2019 [African Americans in Evolutionary Biology: where we have been, and what's next](#) *Evolution: Education and Outreach* 12:18

Lee 2020 [Diversity and inclusion activism in animal behaviour and the ABS - a historical view from the USA](#) *Animal Behaviour* 164: 273-280

Das & Lowe 2018 [Nature Read in Black and White: decolonial approaches to interpreting natural history collections](#) *Journal of Natural Science Collections* 6:4-14

Ecology and Conservation

Eichhorn, Baker & Griffiths 2020 [Steps towards decolonising biogeography](#) *Frontiers of Biogeography* 12.1: e44795

Baker, Eichhorn & Griffiths 2019 [Decolonising field ecology](#) *Biotropica* 51: 288-292

Joshi, Sankaran & Ratnam 2018 ['Foresteing' the grassland: historical management legacies in forest-grassland mosaics in southern India, and lessons for the conservation of tropical grassy biomes](#) *Biological Conservation* 224: 144-152

Plant Soil Environment

Stone & Glover 2017,

<https://link.springer.com/article/10.1007/s10460-016-9696-1>, *Agriculture and Human Values* 34, 87–102

Global Change

Correia 2013 [F**k Jared Diamond](#) *Capitalism Nature Socialism* 24: 1-6

Books

Superior: The Return of Race Science. [Angela Saini](#) 2019.

Charting the infiltration of Race Science into the mainstream

[Decolonizing Nature: Strategies for conservation in a postcolonial era](#). William M. Adams and Martin Mulligan (Eds.) 2003.

[Braiding Sweetgrass](#). Robin Wall Kimmerer. 2013. *An alternative to books on natural history written from Western perspectives*

Blog articles/**Example Lesson Plans**

Evolutionary Biology

[Understanding our eugenic past to take steps towards scientific accountability](#)

[Race, genetics and pseudoscience: an explainer](#)

[Twitter thread](#) on decolonising 'Intro to Genetics' course taught by Gina Baucom at University of Michigan. The thread contains lots of other materials and suggestions.

[Example lesson plan on 'Genetics, History, and the American Eugenics Movement'](#)

[A brief history of African Americans in evolutionary biology and why that is the case](#) by the Molecular Ecologist

Conservation Biology

<https://briarpatchmagazine.com/articles/view/decolonizing-ecology>

<https://thewire.in/economy/conservation-workers-may-day>

