PULSE

The LINNEAN SOCIETY of London

ISSN 1759-8036

ISSUE 47
DECEMBER 2020

NEWS FROM THE LINNEAN SOCIETY OF LONDON – A FORUM FOR NATURAL HISTORY

The Restoration of Carl Linnaeus' *Ortus Sanitatis*: Part One

Few works from the library of Carl Linnaeus capture the eye or the imagination like the *Ortus Sanitatis*. An imposing encyclopaedia—encompassing plants, animals, birds, fish, and minerals—the 'garden of health' was an indispensible reference work for the physicians and apothecaries of its day. The Linnean Society is privileged to own four editions of this important early printed book, with two from the Linnaean estate purchased by James Edward Smith in 1784.

Sadly, time has not been kind to these impressive volumes. Their sheer extent (the 1499 edition runs to some 396 leaves) placed great strain on the bindings, and 500 years of enthusiastic use has taken its toll on the texts. In 2017, support for the restoration of the 1499 Strasbourg edition was solicited via our AdoptLINN scheme, and the Society is indebted to David Goldsmith FLS for his 'adoption' of this work. Tony Bish (a specialist book conservator and former Head of Conservation at the Wellcome Trust) was tasked with bringing the *Ortus* back into bloom.

Images © The Linnean Society of London.

Tony's work in conserving the vulnerable 15th-century text has been painstaking. He began with a thorough clean of the text block, noting areas of weakness and damage. The presence of larger sections of paper at the corners of the text block—known as 'témoin', or witnesses—suggested the book had been trimmed down at least once in its life (probably during its first rebinding in the 17th century).

In order to replace the two detached covers, the original paste-paper boards were carefully delaminated, and the earlier leather retained. This revealed a fascinating array of so-called 'binders' waste': manuscript and early-printed matter reused as binding material. In the past, these fragments were invariably discarded as works were bound and rebound, but the study of such fragments has since become a thriving area of academic enquiry. These pieces will be carefully preserved and documented for future investigation *(see RIGHT)*.

Finally, Tony created two fresh boards to protect the text block, using Japanese washi paper to secure the sewing structure of the individual gatherings. The original spine, meanwhile, had become very concave over the centuries, so the difficult decision was taken to change the binding style to a more flexible 'hollow back' type. This, coupled with some prominent raised bands for extra strength, and a sympathetic new covering, creates a durable but attractive binding for both preservation and use.

The completion of this project in early September was a happy highlight in an otherwise troubled year. The Society is indebted to both Tony Bish for his expert craftsmanship, and to David Goldsmith for generous financial support. Their contributions mean this prized volume in the Linnean Society's library—a treasure among treasures—will endure for centuries to come.

Will Beharrell
Librarian

Read about the discoveries within our 1491 *Ortus*, adopted by James Abell, in Part Two.

Expressions of Joy

VIPERS BUGLOSS, MAKING A BIGGER SPLASH

by Richard Scott, Director, National Wildflower Centre, at the Eden Project

In this hard year, it's heartening to reflect on past perspectives, inspiration, and life affirming forces, which can lift spirits and give a glimpse of a better world that is possible.

ABOVE:
This year, Everton Park in Liverpool blossomed with vipers bugloss *(Echium vulgare)* thanks to a project between the National Wildflower Centre and artist Rebecca Chesney.

BELOW LEFT:
Would Linnaeus have whistled as he walked through this field of vipers bugloss?

In sowing large areas of wildflowers over many years in likely and unlikely places, I hope the work of the National Wildflower Centre founded by the pioneering environmental charity Landlife, has brought much pleasure to people. This year the displays of vipers bugloss, *Echium vulgare*, in Everton Park were extraordinary, linking back to an art project we did with artist Rebecca Chesney in 2013. This location has the finest views of Liverpool (and UK) looking across the Estuary to Snowdonia and the Irish Sea, and is a place evocative of history, a witness to major social upheaval and community heart. For factual references to explain the value of vipers bugloss, I had turned to Richard Mabey's *Flora Britannica,* and came across a quote which made me sit up. Carl Linnaeus apparently adored fields of *Echium* 'surpassing in splendour anything that can be imagined'. For me it made clear what joy can mean in changing the world, and linked to bigger canvases and the principle of the large canvas, as butterflies continue to fade and the extinction crisis and climate emergency bite. This project shows what can be achieved by the simple and iconic act of sowing, which other wonderful minds have pondered—beauty sown by hand by many hundreds of children over the past five years, and this year extended across 15 hectares of the City despite lockdown and uncertainty.

In a letter to his brother Theo in June 1888, Vincent Van Gogh said: 'For such a long time it's been my great desire to do a sower … what remains to be done is … the sower, with colour and in a large format.' The landscape in Everton is about this idea of a bigger canvas, and a bigger splash (reflected in David Hockney's artwork too, on his return to Yorkshire lanes and verges). Often we come across individual plants and only give them close focus. There is seldom the opportunity to see them in a glorious assemblage, to be inspired by fields and blocks of colours, and right now it is good to think of anything in a group more than six. We have been logging decline for far too long. It is large-scale landscapes close to people, dense in spectacle and biodiversity, which show what is possible—seeing is believing. It is about a sense of journey and purpose in life too. It is a demonstration of how we might manage land, with new kinds of land ethics, responding to the circumstances of climate emergency and extinction crisis, of making things better, and involving everyone in a creative conservation journey.

Walking through flower-filled fields and natural landscapes should be an extraordinarily rich experience, reflecting a yearning for the open road and the spirit of the great painters and poets. Yet even great scientists are wary of exposing what has captured their heart or led them on a career path. The Society's Head of Collections, Dr Isabelle Charmantier, offered me another quotation written by Linnaeus as a student in Uppsala in 1729. Of 'Spring' he wrote:

See how all creatures become lively and gay, who through the winter were dull and sluggish! See how every bird, all the long winter silent, bursts into song! See how all the insects come forth from their hiding-places, where they have lain half dead, how all the plants push through the soil, how all the trees which in winter were dormant now break into leaf!

Right now, it is important to reflect on what inspires us to produce and perform, and consider these rare instances where Linnaeus made bold protestations to individual species in writing. As a child whenever he was upset he was given a flower, but it's enjoyable to think of him whistling as he walked through fields of vipers bugloss in Sweden, as he might have done in Everton Park this year.

Essentially it is about loving the world, and Linnaeus certainly did that. It is important to emphasise the sense of wonder and culture the natural world connects to for all discovery and progression. Bold Swedish literary giant August Strinberg wrote, 'Linnaeus was in reality a poet who happened to become a naturalist'. Goethe placed him alongside Shakespeare and Spinoza as a life influence. It is interesting to note that Alfred, Lord Tennyson's 'flower in the crannied wall' touched the philosophy and practice of modern architects like Frank Lloyd Wright, and is now perhaps being rediscovered in buildings like the Bosco Verticale in Milan.

Some years ago I was commissioned by the IUCN in Barcelona to do a simple creative event. Asking the unassuming question, 'What was it that initially inspired you to do what you do?', it was fascinating to be given very personal answers from world experts in ecology, which reflected the ignition of their passion, but also their reticence to talk about it. Elsewhere John Rodwell, architect of the UK National Vegetation Classification (NVC), told me his interest in ecology was fired by feeling the warmth of a hare's resting place in a meadow, after it was disturbed by haymaking. I strung flags of these inspirations outside the Congress—encounters and mysteries revealed, from beetle bites to birdsong. It was enlightening.

Connections of this kind are signposts to life journeys, and this reminded me of the incredible presentation on music and birdsong given by Paul Barritt, violinist with the Halle Orchestra, at the Linnean Society last December (and as seen in the previous issue of *PuLSe*). This beautiful occasion unlocked and shared inspirations and their impact like those of great musicians, through the story of Mozart's starling and the wonder of the lyre bird—a magical evening that seems an age ago, which emphasised themes highlighted in Michael McCarthy's new book *The Consolation of Nature*.

The vipers bugloss flowering in Everton this summer shows that there is great hope. We have harvested the seed in order to expand on the same impact, in the poetry of place and people, in what we can do to make new and bigger canvasses. It is an opportunity to combine wonderful notions of the ability of the sower to offer a helping hand, and to bear witness to the immense benefits nature can bring terms of joy and wellbeing.

It seems fitting to return to Van Gogh writing to his brother from Amsterdam on 3 April 1878, and reflecting on the power of change and endeavour. 'It is good to love as much as one can, for therein lies true strength, and he who loves much does much and is capable of much, and that which is done with love is done well.'

TOP:
Tennyson's 'flowers in the crannied wall' can now be seen in buildings like Bosco Verticale in Milan.

BELOW:
Field of vipers bugloss, overlooked by St George's Church, Everton.

What to do about Plastics?

by Professor Chris Rhodes DPhil DSc FRSA FRSC FLS

The festive season just wouldn't be the same without plastic, used to make many of the plethora of gifts we give to one another, and to package them in. Following the joy of giving and receiving, however, is a hillside of plastic waste, and after every Christmas, in the UK alone, some 125,000 tonnes of plastic packaging is thrown away.

ABOVE:
Fig. 1 'I am not a plastic cup'. Bio-based polymer drinking tumbler, described as '100% compostable' and '100% biodegradable'. Source: https://www.flickr.com/photos/dakima-arts/3509297247 is licensed under CC BY-SA 2.0 (accessed 8 July 2019).

In 2020, so called 'COVID-waste', which includes items such as facemasks, disposable gloves and hand-sanitiser bottles, has added to the burden of plastic pollution. It is ironic that the first synthetic plastic (a form of nitrocellulose) was intended to provide environmental protection, by reducing demand for ivory, from which billiard balls were made, although these ersatz versions would occasionally explode when struck. The subsequent, extensive incorporation of plastics into the commercial fabric of civilisation, substantially contributed to the creation of a consumer society. Thus, while less than 2 million tonnes of plastics were manufactured in 1950, the tally had risen to 464 million tonnes in 2018, and well over a billion tonnes is predicted to be produced in 2050. Plastics are cheap and easy to manufacture, and offer strength but low mass, compared to other materials (i.e. metals). Thus, road vehicles now contain up to 20%, by weight, of plastics, and for the Boeing 'Dreamliner' Jumbo Jet, the proportion is around 50%, thus allowing an expected 20% saving in the amount of fuel needed to be burned per flight.

Plastic pollution

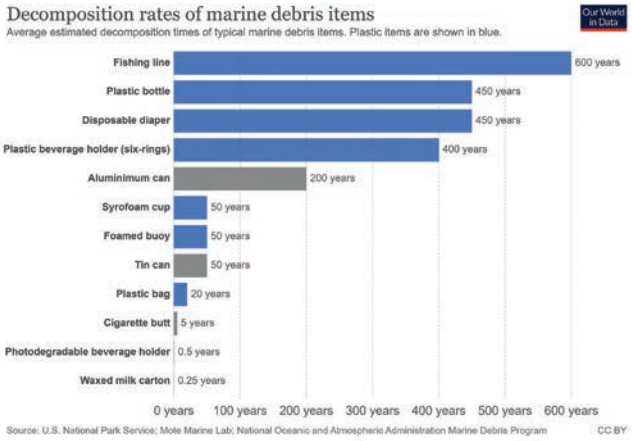
Due to unremitting media coverage, there is a universal awareness of the environmental damage caused by plastic pollution. 8.3 billion tonnes of virgin plastic has been manufactured since 1950, resulting in 6.3 billion tonnes of plastic waste, 79% of which has accumulated in landfills or in the natural environment, and around 9 million tonnes enters the oceans annually, much of this from rivers. Although the durability of plastics makes them highly useful in a myriad of applications, they may persist in the open environment for hundreds of years [Fig. 2]. Indeed, it has been argued that plastic never fully degrades, but merely fragments into increasingly smaller pieces—with potentially adverse impacts on marine life—which are entering and propagating along food chains.

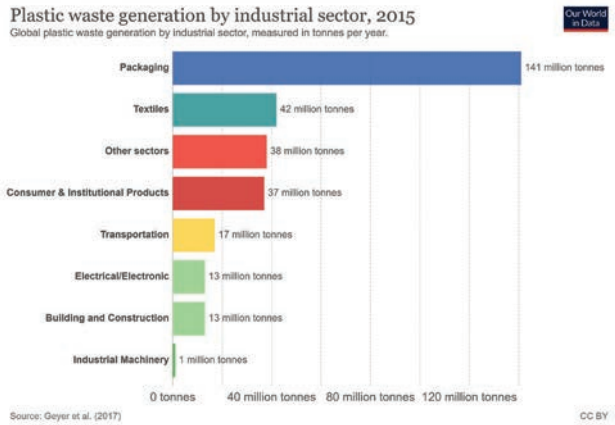
Bioplastics

Biobased polymers are proposed as alternatives to petroleum derived plastics. Nonetheless, to replace a 400 million tonne annual production of petroleum-based plastics would require 150 million hectares of arable land, or 11% of the Earth's total. To meet a projected growth in demand to 1900 tonnes, by 2050, 52% of the Earth's arable land would need to be commandeered, leading to a serious competition between using land to grow crops for food or plastic, similar to the issue of creating first generation biofuels from land based crops. Polylactic acid (PLA) has attracted particular interest, since it is expected to degrade more rapidly in the environment than petroleum based plastics. However, although items made from PLA, such as tumblers for drinks, are often labelled [Fig. 1] as '100% degradable' and '100% compostable', both descriptors may be misleading. In particular, although the term 'biodegradable' means that the component polymer molecules are expected to break down eventually, under the influence of microbial action, the process might take very many years. Similarly, the material does not readily break down in a garden compost heap, but requires the more aggressive conditions of an industrial composting facility to be decomposed into actual 'compost' for growing food.

The ubiquitous presence of microplastics

Microplastics are 5 mm or smaller in diameter. Primary microplastics are plastic particles that were originally manufactured at those sizes in which they are encountered in the environment, and include microfibres from clothing, microbeads, and pellets (nurdles) from which plastic items are made. Secondary microplastics are formed by the degradation of larger plastic items, including bottles for water and other drinks, plastic bags and fishing nets. Evidence for the ubiquity of microplastic pollution is accumulating rapidly, and wherever such material is sought, it seems to be found. Thus,





microplastics have been identified in: Arctic sea ice, the air, soils, rivers, aquifers, remote maintain regions, food, drinking water, the oceans and ocean sediments, including waters and deep sea sediments around Antarctica, and within the deepest marine trenches of the Earth. They have also been detected in the bodies of animals, including humans, and as being passed along the hierarchy of food chains, up to marine top predators.

Using less plastic in the first place

Plastic packaging accounts for 36% of all plastics made, but amounts to 47% of all plastic waste [Fig. 3]. Ninety percent of all plastic items are used once, and then discarded, which corresponds to around 50% of the total mass of plastics manufactured. While the 'Blue Planet Effect' has stimulated several UK supermarkets to offer plastic-free alternatives, in some cases such 'loose' fruit and vegetables are more expensive to buy than their plastic wrapped counterparts.

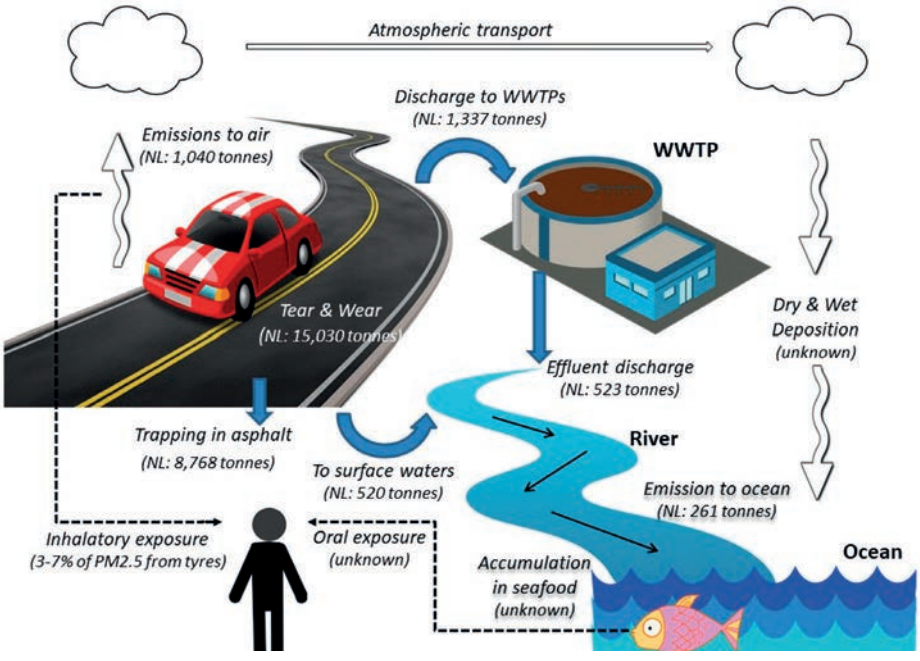
Food is said to last longer when wrapped in plastic, with less being wasted; however, this is only necessary as part of a global/industrial food production/distribution network, and a counterargument is that it leads to more food being bought, e.g. 'buy one get one free' deals, but which is often then thrown away. However, when food is grown locally, more tends to be eaten, and sooner, making plastic packaging unnecessary. Such a more 'localised' approach also means that fewer vehicles are required, and hence less plastic is needed to fabricate their various components, along with a reduction in microplastic pollution, e.g. from tyre abrasion on road surfaces [Fig. 4]. Campaigns to reduce waste from carrier bags (Polyethylene) and drinks bottles (PET) in Europe suggest that behavioural adjustments are possible, but plastics remain a deeply entrenched feature of our modern, consumer society. Given that, currently, only 20% of global plastic waste is recycled, considerable and urgent improvements are necessary to make a real impact on eliminating plastic waste.

The future of plastics

Although environmental concerns have led to a sense of 'all plastics are bad', and the declaration of a 'War on Plastic', it is very unlikely that we can break free from these materials entirely. The availability of cheap and diverse kinds of plastics has unleashed a flood of consumer goods, e.g. the vast proliferation of mobile phones and related devices might not have happened if they had to be made of something else, such as metals, and while plastics are indeed wonderful, they serve to drive and maintain a culture of modern consumerism. In the main, plastics would best be reserved for particular applications where they cannot easily be replaced by alternatives.

If the plastics industry grows as predicted, by 2050, it will be consuming 20% of the global oil supply—up from 6% now. However, because oil is needed for many other purposes, and production challenges are expected to emerge before then, this may prove unrealistic.

The emergence of nanoplastics in the environment poses a new set of potential threats, although, as with microplastics, any human health consequences are as yet unknown. Nonetheless, there are significant grounds for concern, and indeed, plastic pollution must be addressed as part of an integrated consideration of how we use all resources, aiming for regeneration, rather than degeneration, of the natural environment.



TOP LEFT:
Fig.2 https://ourworldindata.org/faq-on-plastics#how-long-does-it-take-plastics-to-break-down

TOP RIGHT:
Fig.3 Primary plastic production by industrial sector, 2015. Source: Ritchie, H. and Roser M (2018). Plastic pollution: primary plastic production by industrial sector (data from Geyer *et al.*). Published online at Our World in Data.org. Retrieved from https://ourworldindata.org/grapher/plastic-waste-by-sector (accessed 8 July 2019).

LEFT:
Fig. 4 Distribution of tyre wear and tear. Source: Adapted from Kole *et al.*; https://upload.wikimedia.org/wikipedia/commons/5/56/Distribution_of_tyre_wear_and_tear.png is licenced under CC BY 4.0/ (accessed 8 July 2019).

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CEREUS: A Blooming Obsession

AN EXTRAORDINARY PLANT THROUGH THE LENS OF MIGRATION, RITUAL AND MEMORY

by Daryl Stenvoll-Wells

ABOVE:
The 'night-blowing cereus' as depicted in Robert Thornton's *Temple of Flora* (1812).
© The Linnean Society of London

BELOW:
From Christopher Jakob Trew's *Plantae Selectae* (1750), the folded *Cereus* flower looks like a 'wrung chicken's neck'.
Credit: Courtesy BHL

The turmoil of recent months has been difficult, but there have been a few silver linings. Each passing month of the pandemic places a renewed emphasis on daily ritual, with increased attention to memory. As autumn segues to winter, a regular splurge on plants and flowers becomes less of an indulgence and more of a survival mechanism. Every week, I place a few blooms next to an old photograph of my grandmother in the windowsill. She passed away eight years ago, at 103. Her story, like so many others, is bound to the natural world and to plant-based rituals passed through generations.

Memory and migration

My grandmother migrated from Macon, Georgia to Washington, DC in the early years of the Depression. My memories of her are from decades later, after she moved to Los Angeles to join my parents, who had made a cross-country migration of their own. She lived in various apartments around south central L.A., far from the fecund vegetation of her home state. But no matter where she moved, she always found a small patch of dirt in which to grow fresh greens: mustard, collard, turnip. This habit was a window into her southern roots.

Sometime before the UK's lockdown began, I received a copy of Isabel Wilkerson's excellent history, *The Warmth of Other Suns*, which recounts of America's great migration: the epic journey of African-Americans from the post-slavery south to urban centres in the north and west, a move that forever changed the entire country. Wilkerson's family, like mine, were transplants from Georgia to the nation's capital.

A number of these tales of uprooted lives sounded familiar, remembrances of Wilkerson's interview subjects from Louisiana, Georgia and Florida echoing stories passed down through my own family. They regularly lamented the loss of connection with the natural world that came with transplantation from their southern homes: the taste of freshly picked pecans; the wet, humid summers; the lush moss dripping from trees—all seemed impossibly calm and beautiful held up against the asphalt roads and concrete buildings of the north.

I was riveted by the chapter entitled 'The Things They Left Behind', in which Wilkerson relates the story of her grandmother's yearly ritual revolving around a special plant in her Georgia garden, the night-blooming cereus:

Once a year on a midsummer night that could not be foretold, a curious plant called the night-blooming cereus would decide to undrape its petals…
"My night-blooming cereus is going to open tonight," she told them. [The neighbours] would arrive at my grandmother's front porch around midnight.
They rocked in the porch swing and waited…
The opening took hours. Sometime around three in the morning, the white petals began to open, and the women set down their sweet tea to crane their necks over the blossom. They inhaled its sugary scent and tried to find the baby Jesus in the cradle in the folds.

Wilkerson's description of this late-night ritual made me wonder if my grandmother ever witnessed this phenomenon; I wanted to know more about this plant that bloomed only once a year, and in such a dramatic fashion. Searching for more tales of southern rituals around the plant, I learned its appearance is frequently imbued with religious significance.

Walter Reeves, a blogger who goes by 'The Georgia Gardener', posts the following inquiries:

'My neighbour has a plant she calls a night-blooming cereus. We stayed up until 1:00 a.m. one night watching the flower open, almost like waiting for a new baby to be born. It has the most heavenly scent.'

'I have a 6th generation flower that I would like more information about. My grandmother always called this flower 'Christ in the manger'. The bloom takes several hours to fully open and is in full bloom around 1:00–2:00 AM. The bloom withers away and is usually hanging at dawn.'

It appears there are a number of species referred to as the 'Night-Blooming' or 'Night-Blowing' cereus. While it is likely that the plant Wilkerson's grandmother tended is most likely an *Epiphylum oxypetalum*, the plant Linnæus dubbed *Cactus grandifloras* is now called *Selenicereus grandifloras.* Both belong to the subfamily cactoideae; both species originate in Latin America and the Caribbean. Their respective names refer to their nocturnal blossoming in alignment with the lunar cycle; the Latin name of *Selenicereus* originated with the Greek word for moon (*selene*), while the *Epiphylum* species is also known as the 'queen of the night'.

Naked, luminous and complicated

These elusive flowers seem to have inspired wonder in artists for centuries. A stunning image of *Selenicereus grandiflora* appears as 'The Night-Blowing Cereus' in Robert Thornton's *The Temple of Flora* (1799–1807). This is an extraordinary example of botanical art of its time, in contrast to other illustrations of the same species. In the 2017 exhibition *Dark Imaginings: Gothic Tales of Wonder* (University of Melbourne), co-curator Susan Thomas describes the remarkable departures of the *Temple of Flora* print:

In the Temple of Flora the Night Cereus has been positioned in the foreground of the illustration to emphasise its size, and the seductive but slightly hostile flower is made to appear proportionally larger and more monstrous—at its most vibrant and sensuous in the shadowy light. The spectral bloom seems partially ensnared by its own serpent-like spiky stem and an entanglement of ivy and oak branches, the latter associated with dark forests and entrapment, and the tree with the ancient gods of thunder and lightning. These gothic overtones can be contrasted with the realism of a mid-century mezzotint of the same plant made by Johann Jakob Haid (1704–1767), after the original painting by botanical artist Georg Dionysius Ehret (1708–1770).

In the ominous background a dilapidated church can be seen, with a clock reading just past midnight, and moonlight ripples on a body of water in the middle ground. It is difficult to imagine succeeding in Thornton's aim of capturing the 'essence' of the flower without such a theatrical setting.

The cereus appears in literature in much the same fashion. In 1791, Erasmus Darwin featured the cereus in the fourth canto of his poem *The Botanic Garden:*

Refulgent Cereal — at the dusky hour
She seeks with pensive step the mountain-bower,
Bright as the blush of rising morn, and warms
The dull cold eye of Midnight with her charms…

Centuries later, the southern American writer Eudora Welty (1909–2001) became one of the founding members of the Night-Blooming Cereus Club in Jackson, Mississippi. In *The Golden Apples* she calls it a 'naked, luminous, complicated flower'; legendary parties were thrown in her garden from dusk to dawn to celebrate its opening. She lamented, however, that by morning the withered bloom would look 'like a wrung chicken's neck'.

Queen of the Night

The International Organization for Migration asserted in their 2010 World Migration Report that 214 million people do not live in their country of origin; approximately 3% of the world's population. So botanical links—be it for food, medicine or, in the case of cereus, spectacle, community, scent and memory—can help to form significant foundations, and even strengthen familial and community ties. In 2017 a Brooklyn writer tweeted an account between himself and a stranger one late, rainy night. The stranger invited the passer-by 'to see a beautiful flower ' — a night-blooming cereus—as this fellow New Yorker simply wanted to share the rare event with someone in the middle of a lonely megacity. It was, the writer noted, 'so delicate. It was the finest thing I have ever smelled'.

The Chinese use dried cereus flowers as an ingredient in Cantonese slow-simmered soup. As my family bundles up for winter, perhaps I'll try to track down some dried cereus blossoms and make them a warming soup. Invoking the spirit of my grandmother's plant rituals, and in recognition of the cross-cultural creativity this plant awakens, I'll have to experience its essence first hand.

ABOVE:
The author's grandmother and mother in Arlington, Virginia, c. 1942.
© Daryl Stenvoll-Wells.

BELOW:
'Night-blooming Cereus (Cereus Triangularis)', 1902, Gelatin silver print 84.XC.979.4081 by Carleton H. Graves.
© The J. Paul Getty Museum, Los Angeles (Gift of Weston J. and Mary M. Naef).

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FORTHCOMING EVENTS 2021

13 Jan **Lunchtime Lecture** **12.30–13.00**	**Exploring the Future of Botanical Image Making** **Speaker:** Laurence Hill *Botanical researcher and photographer*
21 Jan **Evening Lecture** **18.00–19.00**	**Insect Biomechanics** **Speaker:** Dr Walter Federle, *University of Cambridge*
10 Feb **Lunchtime Lecture** **12.30–13.00**	**The potential of Citizen Science in Developing Countries** **Speaker:** Dr Suhel Quader, *Nature Conservation Foundation, India*
18 Feb **Evening Lecture** **18.00–19.00**	**Marine Turtle Conservation** **Speakers:** Prof Annette Broderick *University of Exeter*
4 Mar **Evening Lecture** **18.00–19.00**	**Evolution and Ecology of Snakes** **Speaker:** Dr Wolfgang Wüster, *Bangor University*
18 Mar **Lunchtime Lecture** **12.30–13.00**	**Peculiar Plants of Britain** **Speaker:** Joshua Styles, *North West Rare Plant Initiative*

REGISTRATION IS ESSENTIAL FOR ALL EVENTS:

https://www.linnean.org/events

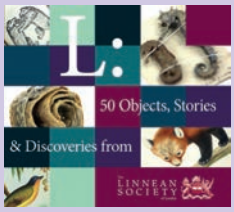
Please check our website for other events not listed here

Idea for an event?

We are seeking speaker proposals for our 2021–2022 programming. Please write in using our Proposal Form (for both Lunchtime and Evening Lectures – **www.linnean.org/propose-an-event**) and send the form to **events@linnean.org**

The Linnean Society uses Polycomp™ to wrap its Fellows' publications, a biofilm consisting mainly of potato & maize starch which is fully sustainable. It can be disposed of via any compost heap, household garden waste bin or household food waste bin.

A Treasure Chest for Fellows



In November we were very proud to have launched our very first 'little book of treasures', *L: 50 Objects, Stories & Discoveries from The Linnean Society of London*. A compilation of favourites from the Society's collections, the book was written by Fellows, curators, staff and researchers and reveals the stories of some of our most unique, interesting and beautiful items.

To purchase a copy please visit www.linnean.org/L50 (delivery available worldwide) or to watch the launch event go to our YouTube channel: https://www.youtube.com/watch?v=GnGtqBTRjuA

Merry Christmas

to all of our members!

After such a strange year, we'd like to wish you a very safe and happy Christmas holiday. While we are looking forward to hopefully welcoming you all back under more normal circumstances in the spring, at time of going to press, the Society is planning to reopen to readers (by appointment) from Weds 13 January 2021. www.linnean.org/library

All the best to you for 2021 from all of us at the Linnean Society of London.

The LINNEAN SOCIETY of London

The Linnean Society of London
Burlington House, Piccadilly,
London W1J 0BF UK
T: +44 (0)20 7434 4479
E: leonie@linnean.org
W: www.linnean.org

PULSE

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