

THE ROYAL BOTANIC GARDENS, KEW AS A UNIQUE CULTURAL
LANDSCAPE OF OUTSTANDING UNIVERSAL VALUE

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Fig. 1. Map of Kew gardens.



**Fig. 2. The Victoria Gate,
Kew Gardens (1868)**



Fig. 3. Kew Palace.



**Fig. 4. Queen Charlotte's
Cottage.**

The Royal Botanic Gardens, Kew are situated in the London Borough (district) of Richmond upon Thames, in southwest Greater London, United Kingdom. They cover an area of 132 hectares within a proposed buffer zone of approximately 350 hectares (Fig. 1).

In July 2003 Kew Gardens was put on the UNESCO World Heritage list thanks to the historical importance of the garden and its

many unique edifices (Fig. 2).

The Gardens, founded in 1759 by Princess Augusta, and subsequently expanded in the 18th century to include two further gardens and other areas, now total 132 hectares in area. They constitute a major cultural landscape, with surviving elements illustrating the interaction between humankind and the natural environment through the development of garden landscape design in the 18th, 19th and 20th centuries. The Gardens contain many buildings of special architectural or historic interest ranging from former Royal residences such as Kew Palace (1631, Fig. 3) and the Queen's Cottage or Queen Charlotte's Cottage, a small structure built in 1771 as a picnic retreat for Queen Charlotte (1771, Fig. 4), through garden buildings such as the Orangery (1761, Fig. 5) and the Pagoda (1761, Fig. 6), to major botanical buildings of the 19th and 20th centuries such as the Palm House (1844–1848, Fig. 7) – perhaps the world's most famous extant plant conservatory.

The Royal Botanic Gardens, Kew form a unique cultural landscape of outstanding universal value. They have developed from their 18th century origins as two royal estates to become a world-class scientific institution with botanical collections of global significance.

During their



Fig. 5. The Orangery.

were responsible for fundamentally altering the biodiversity and economies of many of its colonies. Throughout these changes the Gardens have remained open to members of the public and they currently welcome one million visitors a year.



Fig. 6. The Pagoda.

collection and study since the late 18th century. The Gardens are notable for the role they played in the translocation of plants across the British Empire during the 19th and 20th centuries, which resulted in the establishment of new agricultural economies and fundamentally influenced global biodiversity.



Fig. 7. The Palm House.



Fig. 8. The Wales family. the globe and was responsible for supplying the plants, and horticultural advice, necessary to create entirely new economies in the colonies.

development the Gardens have taken many forms as various keynote architects and landscape designers sculpted and re-sculpted the site. These changes have left the site with a rich palimpsest of historic garden landscapes and an internationally significant collection of architecture. In the latter half of the 19th century the

Gardens also served the needs of the British Empire and

The Royal Botanic Gardens, Kew is a rich historical cultural landscape that has developed through centuries of scientific and cultural evolution. The Gardens are currently recognised as a global center of excellence in the study of plant diversity and economic botany. Kew also holds the world's largest documented living and preserved plant and fungal collections, and has been recognised as a leader in plant

collection and study since the late 18th century. The Gardens are notable for the role they played in the translocation of plants across the British Empire during the 19th and 20th centuries, which resulted in the establishment of new agricultural economies and fundamentally influenced global biodiversity.

Princess Augusta, widow of Frederick, Prince of Wales (*Fig. 8*), established a botanic garden at Kew in 1759. This began as a small physic garden but was later combined with her father-in-law's (King George II)

adjacent estate and during the latter part of the 18th century the combined gardens grew rapidly under royal patronage and soon held some of Europe's most significant botanical collections. As the British Empire grew the gardens developed close links with the colonies, which Kew used as the focus for its collecting activities. Kew also redistributed plants from across



Fig. 9. William Nesfield.



Fig. 10. The Temperate House.



Fig. 11. Princess of Wales Conservatory.



Fig. 12. The Waterlily House



Fig. 13. The Alpine House.

The nominated site's present landscape is a palimpsest of features from the 18th, 19th and 20th centuries. The dominant design is William Nesfield's 1840s layout (Fig. 9) [10]. This highly structured landscape with its three major axes centred on the Palm House (Fig. 7) has survived relatively intact and is an excellent example of Victorian landscape design.

The architectural heritage of Kew is equally important and includes a number of internationally significant buildings including a former royal residence (Kew Palace (Fig. 3), a rare surviving 17th century house that served as a royal residence in the 18th century), 18th century ornamental garden structures such as William Chambers's Pagoda [12] and later botanical buildings. These later buildings include three world

Famous glasshouses from the 19th and 20th centuries; The Palm House, a masterpiece of Victorian glasshouse technology and perhaps the world's most famous botanical conservatory; the Temperate House (Fig. 10), the largest surviving Victorian glass structure; and the 20th century Princess of Wales Conservatory (1987, Fig. 11), one of the world's most technologically advanced, environmentally efficient glasshouses and winner of the 1989 Europa Nostra Award for Conservation. Alongside these keynote features are over 30 other historically significant structures related both to the scientific and royal history of the Gardens [8, sec. 2, p. 3, p. 109].

A much smaller but no less interesting greenhouse is the Waterlily House (Fig. 12), which was built in 1852. The giant water lilies have leaves that can reach a diameter of up to 2.5 meter (8ft). The leaves can support a weight of up to 45 kg [11].

The Alpine House (Fig. 13), the latest among a distinguished collection of glasshouses at Kew, has an unusual role for an English glass house: to keep the plants cool, rather than warm. The Davies Alpine House was opened in 2006 being the first new greenhouse to be built in Kew Gardens for 20 years. The odd-shaped building houses Kew's collection of alpine plants. The Davies Alpine House was designed to recreate the dry, cool, windy conditions alpinists need to thrive, without using energy-intensive air conditioning and wind pumps.

The collections at Kew are equally, if not more, important than the architecture and can be divided into three types: preserved plant collections; living and genetic

resource collections; and documentary and visual reference collections. The living collections include over 70,000 live accessions from over 30,000 different taxa. The Archive and Library holds 750,000 published volumes, 200,000 photographs, over 175,000 botanical illustrations and a considerable quantity of primary archival material relating to key events in world botany and Kew's development [8, sec. 2, p. 4].

One aspect that differentiates Kew from the comparative group of botanic gardens is its pivotal role in the distribution and establishment of exotic species across the British Empire and beyond. Many of these exotics were transplanted primarily for economic purposes and some still form the basis of present-day agricultural economies, including, for example, rubber production in Malaysia, India and Sri Lanka. Kew was also responsible for introducing European agricultural techniques to many of the colonies, although not always with great success [8, sec. 2, p. 6–7].

Kew's living collections include over 70,000 live accessions representing 30,000 different plants, whilst the Herbarium alone holds over 8 million preserved specimens. The documentary archive holds over 1 million items relating to major events in plant translocation, botany and Kew's development. In comparison New York has 6.5 million preserved specimens in its herbarium, whilst the National Herbarium at Sydney holds only 1 million specimens. The herbarium at the Jardin des Plantes, (Musée Nationale de l'Histoire Naturelle) in Paris may contain as many specimens as Kew, but accurate documentation is not available to substantiate this claim. Berlin holds 22,000 different species and New York holds 19,000 [8, sec. 2, p. 7].

Thus, plant collecting, as pioneered at Kew, provides vital scientific information that helps us classify and better understand the living world, an activity that surged in popularity in the Victorian era [1; 2; 3; 4; 5; 6].

References

1. Петько Л.В. Актуальність формування професійно орієнтованого іншомовного навчального середовища в умовах університету / Л.В.Петько // Гуманітарний вісник ДВНЗ «Переяслав-Хмельницький державний педагогічний університет імені Григорія Сковороди»: збірник наукових праць. – Переяслав-Хмельницький, 2014. – Вип. 33. – С. 128–141.

2. Петько Л.В. Написання і захист рефератів іноземною мовою за професійним спрямуванням – один із шляхів підготовки студентів до навчання у магістратурі / Л.В.Петько // Науковий часопис Національного педагогічного університету імені М.П. Драгоманова. Серія № 5. Педагогічні науки: реалії та перспективи. – Випуск 35 : зб. наук. пр.– К. : Вид-во НПУ імені М.П.Драгоманова, 2012. – С. 132–138. URI <http://enpuir.npu.edu.ua/handle/123456789/7842>

3. Петько Л.В. Педагогічна сутність у визначенні поняття «освітнє середовище» / Л.В. Петько // Гуманітарний вісник ДВНЗ «Переяслав-Хмельницький держ. пед. ун-тет імені Григорія Сковороди»: зб. наук. пр. – Переяслав-Хмельницький, 2014. – Вип. 34. – С. 109–118. URI <http://enpuir.npu.edu.ua/handle/123456789/7452>

4. Петько, Л. В. Фільми іноземною мовою у формуванні ПОІНС для студентів-біологів / Л. В. Петько // Критичний підхід у викладанні природничих дисциплін : матеріали Міжнародної науково-методичної конференції, 14

листопада 2018 року / укл. : О. П. Галай [та ін.]. - Київ : Вид-во НПУ імені М. П. Драгоманова, 2018 - С. 118–124.

5. Турчинова, Г. Зміст курсу навчання викладання біології англійською мовою / Г. Турчинова // Збірник наукових праць Уманського державного педагогічного університету імені Павла Тичини / [гол. ред.: М. Т. Мартинюк]. - Умань : ПП Жовтий, 2012. - Ч.1. - С. 307–317.

6. Турчинова, Г. В. Формування професійно значущих якостей майбутнього вчителя природничих дисциплін / Г. В. Турчинова // Критичний підхід у викладанні природничих дисциплін : матеріали Міжнародної науково-методичної конференції, 14 листопада 2018 року / укл. : О. П. Галай [та ін.]. - Київ : Вид-во НПУ імені М. П. Драгоманова, 2018. - С. 112–118.

7. Davey Peter, Walter Forster Kurt. Exploring Boundaries: The Architecture of Wilkinson Eyre. Springer Science & Business Media, 2007. 176 p. URL:

https://books.google.com.ua/books?id=nufzgEGAWTwC&pg=PA59&lpg=PA59&dq=EXPLORING+THE+WORLD%27S+TROPICAL+PLANTS+IN+THE+PALM+HOUSE+AT+KEW&source=bl&ots=RP6ycgN9U2&sig=ACfU3U1NJ2O79aXoRYS3yUv4QEbSPDbs9g&hl=ru&sa=X&ved=2ahUKewjZv4P_tpThAhUQiYsKHSVACJYQ6AEwDHoEAcQAQ#v=onepage&q=EXPLORING%20THE%20WORLD'S%20TROPICAL%20PLANTS%20IN%20THE%20PALM%20HOUSE%20AT%20KEW&f=false

8. Royal Botanic Gardens, Kew World Heritage Site Nomination Document. Published by: Royal Botanic Gardens, Kew and Historic Royal Palace / Prepared by: Chris Blandford Associates. Date of Inscription: 5th July 2003. Published by: Royal Botanic Gardens, Kew and Historic Royal Palaces URL: <https://whc.unesco.org/uploads/nominations/1084.pdf>

9. Parker Lynn, Ross-Jones Kiri. The Story of Kew Gardens in Photographs. London: Arcturus Publishing, 2013. URL: https://books.google.com.ua/books?id=9YAEAwAAQBAJ&pg=PT153&lpg=PT153&dq=victoria+gate+william+nesfield&source=bl&ots=sHFQePm75N&sig=a6k9N0RSTOPO-Y847EAIarM3bn4&hl=en&sa=X&ei=KfrEU8HpH6Ty7AajrICYBg&redir_esc=y#v=onepage&q=victoria%20gate%20william%20nesfield&f=false

10. Antonetti Nina. William Andrews Nesfield and the origins of the landscape architect. *Landscape History*, 2012. No. 33:1. P. 69–86. DOI: 10.1080/01433768.2012.671037

11. Kew Gardens. URI: <https://www.aviewoncities.com/london/kewgardens.htm>

12. Always a Princess, Never a Queen: Augusta of Saxe-Gotha. URI: <https://rebeccastarrbrown.com/2017/02/15/february-15-the-death-of-augusta-of-saxe-gotha-princess-of-wales/>

13. Top Ten Attractions at Kew Gardens. **Video.** URI: <https://www.youtube.com/watch?v=7ngHhWAFzBc>

14. Royal Botanic Gardens, Kew (UNESCO/NHK). **Video.** URI: <https://www.youtube.com/watch?reload=9&v=h1P52BxzyFo>

15. Kew Gardens. The Palm House. The Icon of Kew. **Video.** URL: <https://www.youtube.com/watch?v=HMaomjhGoAc>

16. Royal Botanic Gardens, Kew. **Video.**
<https://dearkitty1.wordpress.com/2014/04/04/kew-gardens-threatened-by-british-government/> 17. Kidder Smith G. E. Looking at Architecture. New YOUK: Harry N. Abrams, Publishers, 1990. ISBN 0-8109-3556-2.