Royal Botanic Gardens Kew

The quest for quinine: biocultural collections and networks of exchange in the 19th century

Kim Walker k.walker@kew.org

Supervisors: Mark Nesbitt (Kew), Felix Driver (RHUL)



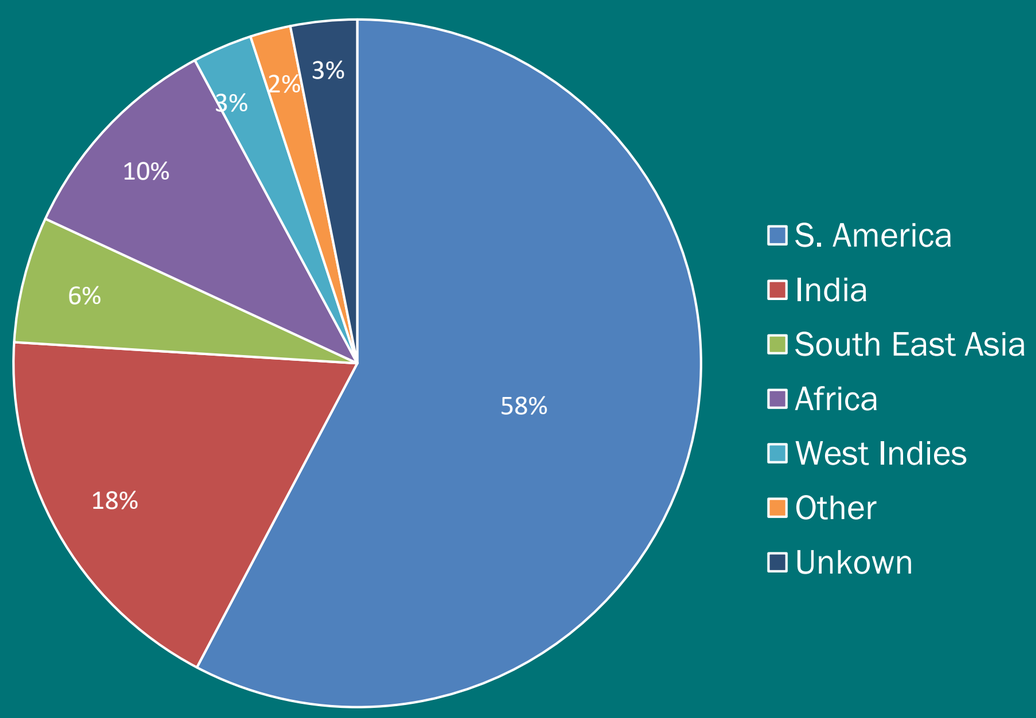
Quinine sachet, Economic Botany Collection, Kew

Introduction

Cinchona bark (*Cinchona* sp.) and its constituent quinine alkaloids were the only anti-malarial known to the West for 350 years. Kew played a central role in transferring the plant from its native Andean range to Indian plantations. Analysis of Kew's herbarium and Economic Botany collections, which represent forests that no longer exist in the wild, enriches histories of drug development, empire, bioprospecting and sustainability.

Methods

1: Imaging, transcribing and coding collection datasets by date, type collector and geographical origin.



Kew's cinchona collections by origin
(Herbarium + Economic Botany collections) n=1,890

2: Mapping the archives: cross-linking cinchona collections with collectors, publications, and archives to reveal circulation across networks.



Conclusion & impact

Collections were fundamental in unlocking the biological secrets of cinchona, and their mapping is giving new insights into how 19th century scientists and institutions collaborated across national borders.

Improved understanding of Kew's historic collections enables better science and outreach. The data from this project allows contextualization and focused targeting of samples for phylogenetic analysis of cinchona in a collaborative PhD project at University of Copenhagen. Our work at Kew and Copenhagen will be presented at Kew's Science Festival in July.



Phylogenetic sampling of Kew's collections, Nataly Canales, Copenhagen

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