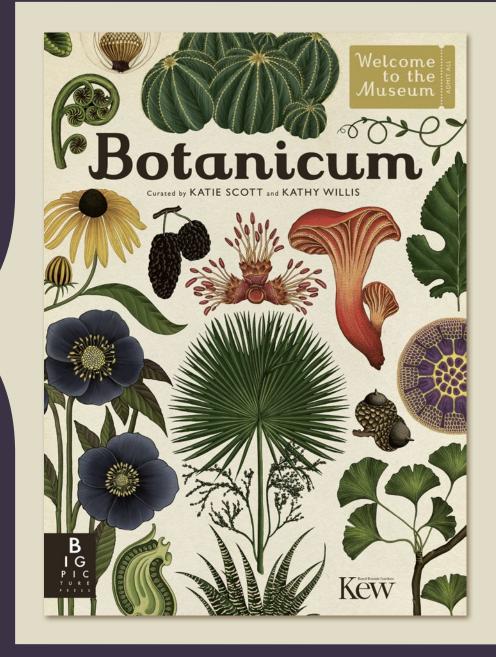
## **Botanicum**



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## **Botanicum**









Fungi and Lichens





THE FIRST PLANTS

## Club Mosses, Horsetails and Whisk Ferns

The common names we use for plants are sometimes not an accurate reflection of scientific definitions Cub mooses, for example, are not actually mooses, in fact they are wascular plants. This means that they contain a well-developed system of specialized cells, innova as vaccular bundles which allow the plants to grow upright and much tailer than bryophytes, which lack a vascular system (see pages 10–11). Horsetails and whisk ferms also contain vancular strands.

There three groups of plants, which reproduce by spores, have anderst lineages and are other referred to as lineignosist because three are fossilremain adarg from (00–370) million years ago that are very initial instructure to the dum onsex, horecasti, and whick form we see growing tools, but with one importunt difference the present day plants are reall hets – usually less that I min height, By comparison, their anreators were given in height, a usually less that I min height, By comparison, their anreators were given horsetail and lycophyse trees (related to club mosse), towering up to 40m in height, dominated the early Carbonierous indicapes (see page 16–17). The given tree-forms these plants must be faite of most pages of life in Darth – endition, our competed by better adapted rivals so that all we are nowled with are the ministure forms that were able to survive.

	Key to plate	
J: Chib mon	sporangia, which are produced at	S: Field horsetall
Selaginella lepisophylia	the margin of polygonal structures	Equivetum onemie
Height: IDon	grouped into a 'cone'. These cones are	Height: 20-50cm
Out-moses have small scale-like	usually situated at the apex (top) of	The vegetative shoots of field
issues wrapped all around their starrs.	the plant.	horsetals have whorled branches and look feathery. The actual leaves are
2: Whisk fern	sf: Field horsetail	amail, papery, and fused into a sheath
Paiotum complanatum	Equiertum anemie	on the stem The cones that contain
Height up to 75cm	Diameters 3-Seven	the spores are found on pale. fertile
This species of whish ferrils usually	Section through stem	shoots, which grow before the togger
found hanging from the trunks of trees	This section through a young horsetail	green vegetative ones Field horsetall
in tropical regions. It does not have	stem shows how vascular bundles	grow in damp or wet places.
roots or leaves but it has small scales	(the round circular sections) extend	
on the dam.	up through the whole plant stem.	6: Sporophyll of a club more
	These woody strands allow the	Lycopodum dovotum
3: Horsetal	spward movement of water and sap	Sporophyl length: 2+2.5evm
Equaetum hyemale	throughout the plant.	Sporophylis are tiry leaves that bear
Core hegic Ion		the sporangia (spore-production
Core		centres).
The spores of horsetails come from		

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