

"THE STRUCTURE OF FLOWERS IN RELATION
TO POLLINATION"

New Westminster Horticultural Soc.
Dec. 2nd. 1935.

Pollination versus Fertilization
"Fertilized by Insects"?
Primitive flowers pollinated by agency of wind.

CHARACTERISTICS OF WIND POLLINATED FLOWERS.

Non-showy. No nectar. Pollen small smooth, light, abundant;
flowers early, Anthers dangle.

Adaptations to ensure cross pollination

Plantago:- proterogyny
Monœcious or diœcious plants
(Alnus or Mercuriales)
Liability to mistake Willows. Why?

CHARACTERISTICS OF INSECT POLLINATED FLOWERS

Showy, perfume, nectar, small amount of pollen, may be sticky.

PROTECTION FROM CRAWLING INSECTS.

Stiff hairs, glandular hairs, moats. (Silphium)
Shallow flowers for short tongued insects.
Deep flowers, highly specialized for special insects.
Time of flowering to suit (Honey suckle)
Hovering Hawk moths, or Humming birds.
Simple structure:- Ranunculus, and other shallow open flowers;
advancing by development of special mechanisms.
Berberis, Vaccinium, Salvia, Aristolochia, Orchis,
Macroplectrum (Madagascar) Epilobium, Yucca whipplee,
Ficus, Cytisus, Primula, Composites, Antirrhinum.

PROTECTION OF POLLEN FROM RAIN; why?

Drooping flowers, closing or sleep movements.

Robbers

Water plants:- Vallisneria, Zostera.

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ILLUSTRATIVE MATERIAL

MODELS

Alnus
Ranunculus
Berberis
Orchis

DIAGRAMS

Aristolochia
Primula

SPECIMENS

Ficus
Plantago lanceolata
(series of flowers in diff. stages)
Epilobium angust. (flowers in diff. stages).
Silphium to show connate leaves.
Berberis aquifolium.

CHALK AND DUSTER.