

# Collecting Botanical Specimens

The ultimate goal is to make a more or less two-dimensional representation of a three-dimensional part with associated information.

# Stages of collecting

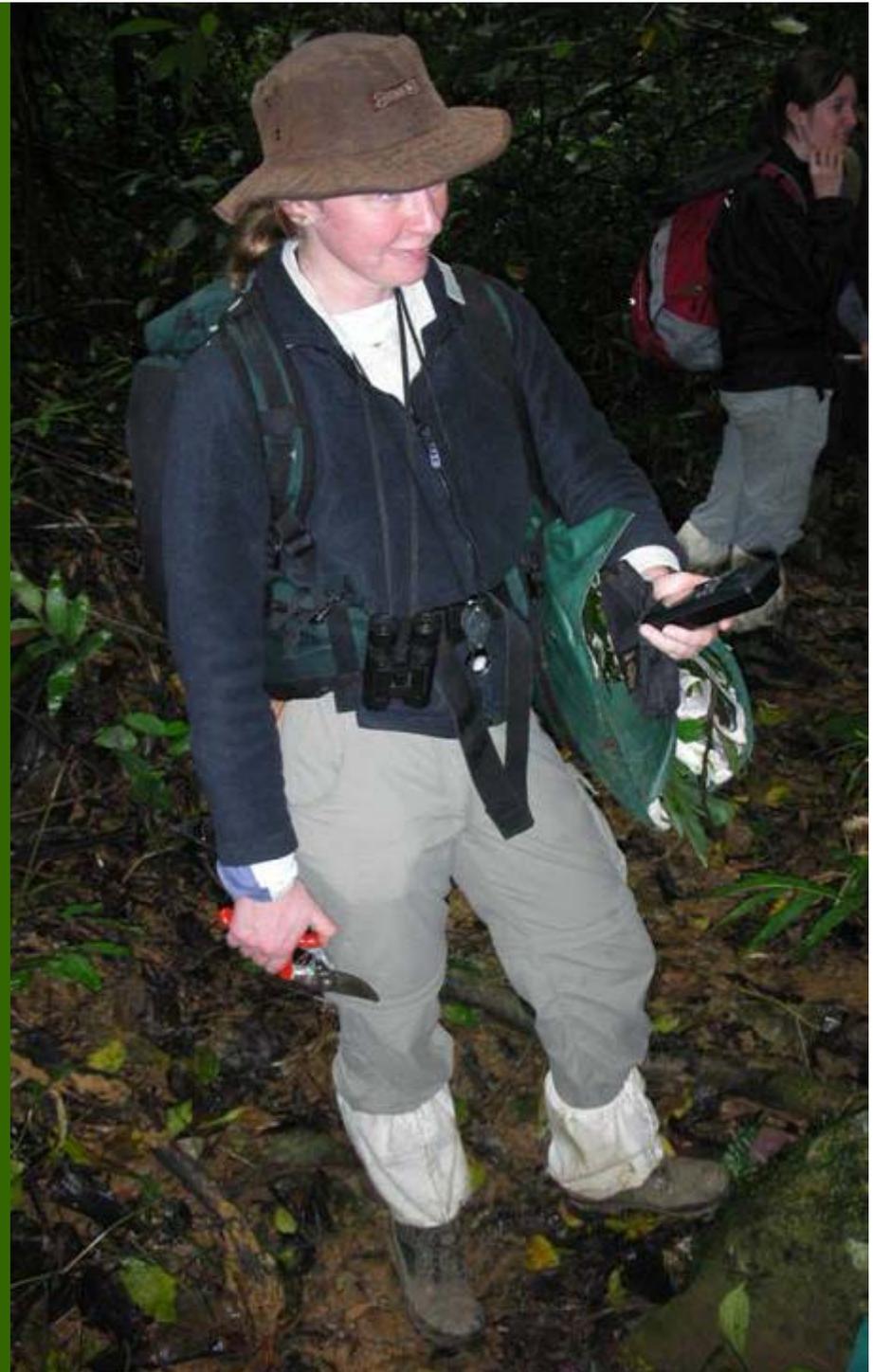
- Preparation
  - Visas, permits, equipment
- Collecting specimens
  - Collection, tagging, field pressing etc.
- Recording data
  - Label production
- Specimen processing
  - Drying or alcohol
  - Herbarium incorporation

# Equipment

- Collecting tools:
  - Secateurs, machete, pruning saw, trowel
- Field press
  - Newspapers, cardboards, string
- Plastic bags
  - All sizes, especially large
- Tags
- Data
  - Notebook, GPS, altimeter

## The perfect botanist?

- Hand lens
- Binoculars
- Secateurs
- GPS
- Field press
- And of course....  
leech socks



# What to collect:

- What will represent the plant?
- Samples of all organs available
- At least two sets (=duplicates)
- Large plants
  - Complete notes
  - Complete parts
- All sizes – not just ‘easy’ ones
- Only one taxon per number

# Field pressing

Making notes

Writing tags

Field press

Trimming  
specimens



# Numbering specimens

- Each collection is numbered
- Number allows label to be assigned
  - Tag each part with the number
- Use each number only once
  - A running sequence is easiest
- Use pencil on the tags
  - Does not come off in alcohol

# Tags:

- Use pencil
- Every set
- Every part



# Recording data

- Data for labels
- Specimen = collection + label
  - Without the label the specimen is useless
- Part of the collecting trip
  - Collector's responsibility to write up label data
  - Send it to the collaborating institute

# The minimum data

- Locality including the country
- Habitat
- Altitude
- Field identification
- Collector's name and number
- Date of collection
- ?Plant description

# Full data

- GPS data
- Geology
- Plant description
  - Habit, sizes, colours, smells, textures
- Project data
  - Herbarium and collaborator information
- Local names (check reliability!)
- Uses

# Habit

- Size: height and diameter at breast height (dbh)
- Slash
- Exudate: thickness, colour, smell
- Thorns or spines
- Buttresses?
- Shape in cross section

# Leaves

- Deciduous or evergreen
- Texture
- Exudate or glands
- Orientation: hanging, erect etc.
- Large (measure in the field)
- Heterophyllous:
  - Young leaves a different colour?

# Inflorescence & flowers

- Position:
  - Axillary, cauliflorous
- Scent
- Colour
- Sexuality:
  - Hermaphrodite, dioecious
  - Different sexes, different plant = new number
- Pollinators (or floral visitors)

# Fruit and seeds

- Colour
- Texture
- Size, shape,
  - especially fleshy fruits which will shrink
  - measure and record size when fresh
- Aril colour, texture
- Dispersal agents?

# Label examples

## The University of Reading Herbarium RNG

### FLORA OF THE BRITISH ISLES

*Populus tremula* L.

Berkshire, v.c. 22, 10 km E of Newbury, Upper Bucklebury,  
adjacent to Bucklebury Common, alongside lane to cemetery.  
SU545687.

51° 25' N, 1° 12' W alt. 130m

In *Betula* 'coppice'; land liable to severe winter flooding.

Several trees, but no female ones present.

D.J.N. Hind 46

24/ 4/ 1983



# Specimen processing

- In the tropics most plants will grow mould within several days if not dried sufficiently.
- Drying in the field or field station
  - dried specimens keep their colour
  - do not become as brittle as alcohol specimens
- Preserving with alcohol
  - Useful when travelling around a lot
  - Less equipment needed

# The alcohol method

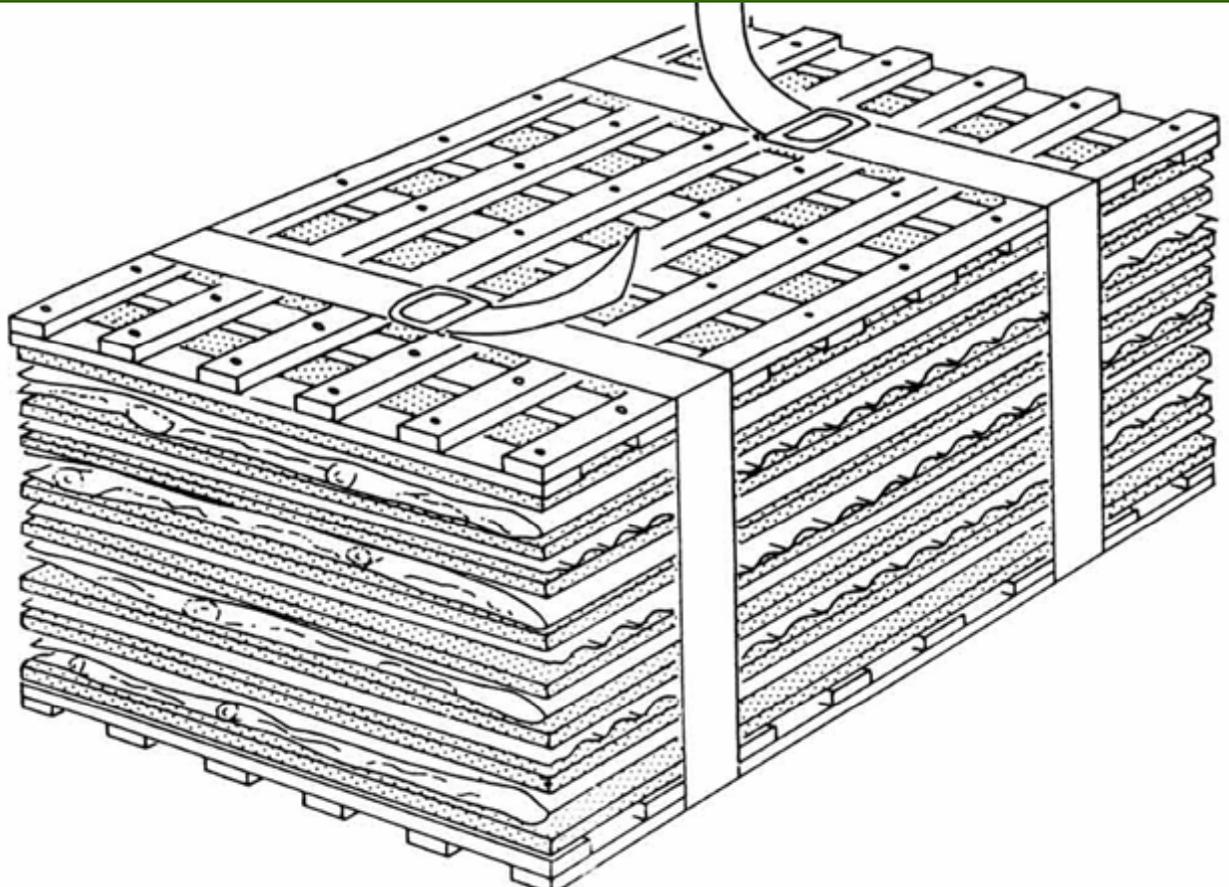
- Also called the Schweinfurth method
- Specimens placed within newspapers
- A good sized bundle is put in a bag
- Alcohol added
- Bag sealed
- Specimens stored up to c. 3-4 months
- Specimen pressed and dried later

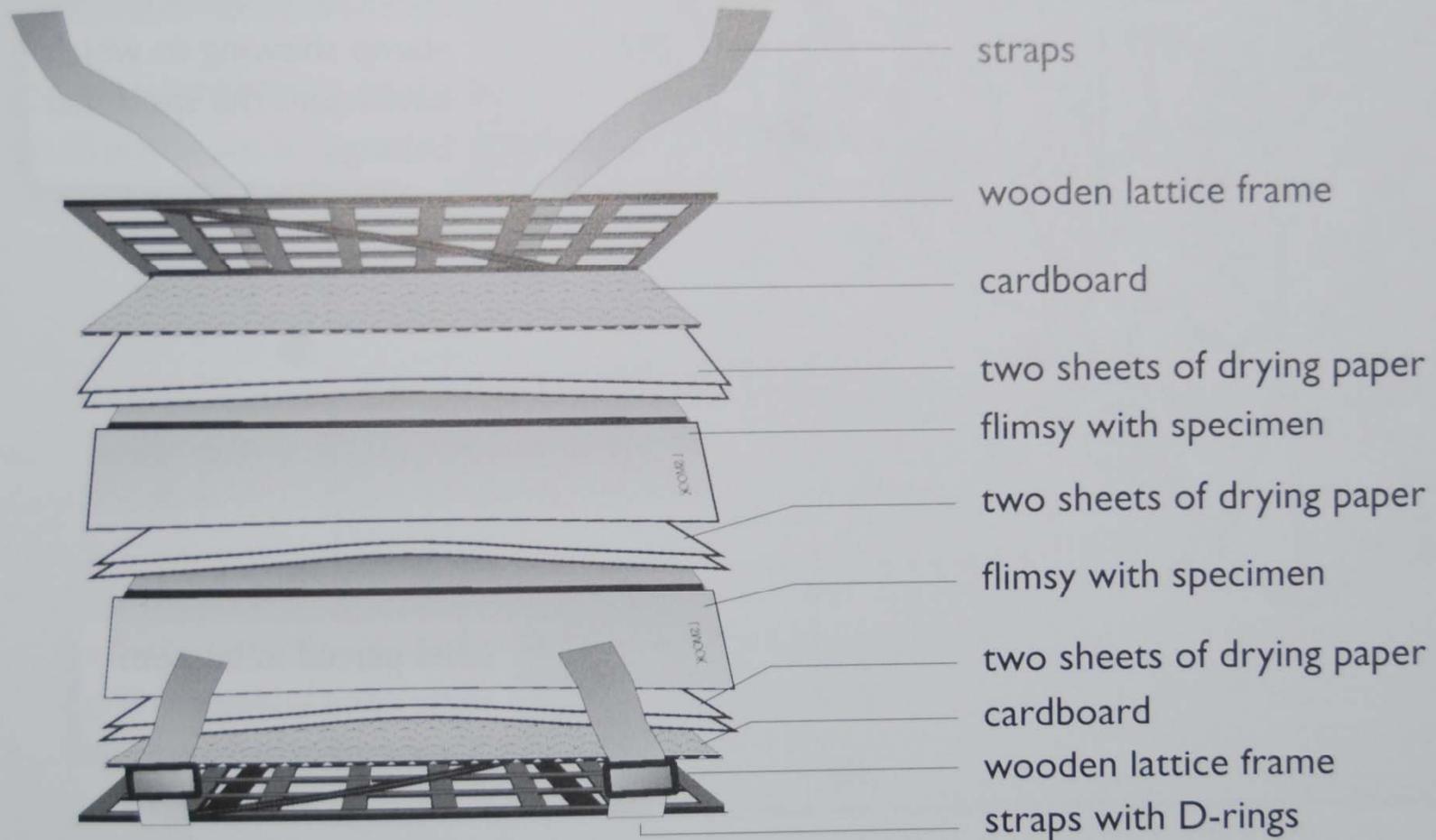


# Drying specimens

- In the field or after alcohol processing
- Alternate layers of:

cardboard  
corrugate  
specimen  
cardboard  
corrugate  
specimen....





The sequence in which a plant press is packed.

# Drying contd.

- Gentle heat for c. 2 days (max 4 days)
- E.g., in an oven or over a gas burner

