

TAXONOMIC KEYS

BRACKETED AND INDENTED

- Taxonomic keys- used for identification of plant or animal
- Defined as **devices consisting of a series of contrasting / contradictory statements or propositions requiring the identifier to make comparisons and decisions based on statements in the key as related to the material to be identified**
- Helps in quick identification of unknown plant

- Always a choice between two contradictory statements is provided, one can be accepted and the other rejected
- A single pair of contradictory characters is named as a **couplet**
- Each statement in the couplet- termed as a **lead**
- By making the correct choice at each level one can arrive at the name of the correct plant

Proper Use of keys

- 1. Appropriate keys to be selected from floras, manuals, handbook, monograph, revision etc. Cultivated plants- not usually given in floras. So for these- manuals treating such plants to be used**
- 2. Introductory comments to be properly read first**
- 3. Both leads should be read before making a choice. Sometimes the first lead may seem to be correct, the second lead may be more appropriate**

- 4. The meaning of unknown terms should be checked using the glossary**
- 5. When measurements are used such as the length of leaf, fruit etc. several materials/ specimens to be measured**
- 6. No decision to be taken based on single observation**
- 7. Results should be verified by reading a description, comparing the specimen with illustration or an authentic herbarium specimen**

Construction of keys

- Always use **constant characters, not variables**
- Never use terms such as **large/small**, instead **make correct measurements**
- **Characters always available are to be used rather than seasonal characters**
- Always use positive terms. Eg. *Stipule Is present* - can be used but not- *stipule is not present*
- As far as possible both choices of a pair to be started with the same word-
- eg. **Seeds round**
 Seeds oblong

- **If possible different pairs of choices should start with different words**
- **Flowers white**
 - sepals free**
 - sepals fused**
- Flowers red**
 - corolla 1-2 mm long**
 - corolla 3-5mm long**

Types of keys

- **Dichotomous keys-** choice is made only between 2 alternate couplet are called dichotomous keys
- **Contrasting characters are chosen which divide the full set of sps into smaller groups**
- **Each time number of sps are eliminated so that the choice is narrowed down to the correct sps**
- **Dichotomous-** Greek origin: *dich*- two; *temnein*- to cut

Types of dichotomous keys

- **Indented key/ yoked key-** indents the leads of the couplet a equal distance from the left margin
- The two choices are labelled 1 and1' or 1a and 1b
- **Bracketed key-** both choices are given side by side
- Choices are numbered/lettered

Indented key on *Rhododendron*

1a. Flowers in shades of red

2a. Flowers blood red, leaves oblong-ovate, leathery and thick
matty texture- *R.sikkimense*

2b. Flowers crimson red, leaves broad, oval to elliptic
oblong, shiny green above- *R.fulgens*

1b. Flowers in shades of rose pink

3a. Calyx 3-5 mm long, leaf undersurface covered by brown hair-
R.wallichii

3b. Calyx 1-2 mm long, leaf undersurface glabrous-
R.campanulatum

Bracketed key on *Rhododendron*

1a. Flowers in shades of red-----go to 2

1b. Flowers in shades of rose pink-----go to 3

2a. Flowers blood red, leaves oblong-ovate, leather and thick matty texture.....*R.sikkimense*

2b. Flowers crimson red, leaves *broad, oval to elliptic oblong, shiny green above*- *R.fulgens*

3a. Calyx 3-5 mm long, leaf undersurface covered by brown hair-
R.wallichii

3b. Calyx 1-2 mm long, leaf undersurface glabrous- *R.campanulatum*

Draw backs

- **The key may not include all potential variations in the sps**
- **May rely on features not present in the season**
- **May not include all sps of interest**
- **One may misinterpret and make a mistake**