

## Background

The Herbarium at RBGE holds three million specimens with the oldest specimen dating back to 1697. Each of these specimens is a valuable piece of information about the presence of a species in a particular place and time and together they cover nearly 2/3 of the world's flora. They are used primarily for taxonomy, helping us understand the diversity of species and where they grow. They are also now being used for an ever expanding range of studies such as predicting the effects of climate change on potentially vulnerable species.

We are working to make the specimens more accessible by databasing the information which is attached to the specimen, usually in the form of a label with the collector, date, locality and description. The specimens are then being photographed and made available online on our website <http://data.rbge.org.uk/herb>.

The amount of information on the labels is very variable, and more recent specimens usually have much more information than those collected earlier. Many of the specimens do not get identified in the field, and are brought back with just a family or genus name on the label. Over time, these are examined by experts who will usually be able to determine which species it is or to decide that it is, in fact, a new species. However, this process takes time and not all specimens can be seen by an expert quickly.

## Project

We currently have about 1,500 specimens of the family Compositae in the Herbarium which have not yet been identified to genus. Of these, we have digitised the specimens from South West Asia & the Middle East, as well as Temperate South America (Argentina, Chile & Uruguay). We are asking for help in sorting these specimens into groups which could then be looked at by experts in the family. At this stage we are wanting to select all the specimens which may belong to one of the subfamilies in Compositae: the Cichorioideae. Familiar plants in this subfamily are dandelions and lettuce.

Flower Structure in Compositae,

In Compositae, the flowers are generally small and grouped together into an inflorescence which looks like a single larger flower. The individual flowers can take more than one form:

Disc flowers. The petals form a tube and they usually have both male and female parts. They can be seen in the centre of many inflorescences such as in the daisy.

Ray flowers. In these flowers the petal tube forms a long flat strap. These flowers are either female or neutral. They often form an outer ring of flowers such as in a daisy.

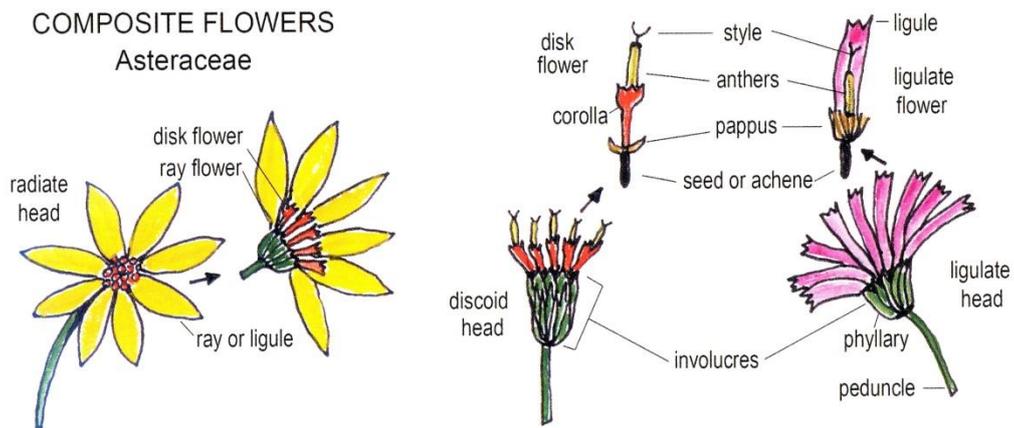
Ligule flowers: These flowers are very similar to the ray flowers above but they have both male and female parts. They long ray generally has five teeth at the tip.

The species in subfamily Cichoriodeae are characterised by the following:

1. Flowers heads with only ligule flowers, which generally have the five **teeth** visible at the tip.
2. Frequent presence of latex which will not usually be visible on the specimen but may be mentioned in the description on the label.

### Question

Please look through the images of the specimens provided and answer yes to those which have one or both of these two characters.



Thanks to James Lightner for allowing the use of this image; you can find this and other botanical terms illustrated in the book, *San Diego County Native Plants* by James Lightner (2011)

Image from <https://www.sanelijo.org/plant-guide/glossary>

Examples

Teeth



E00107187



E00614047