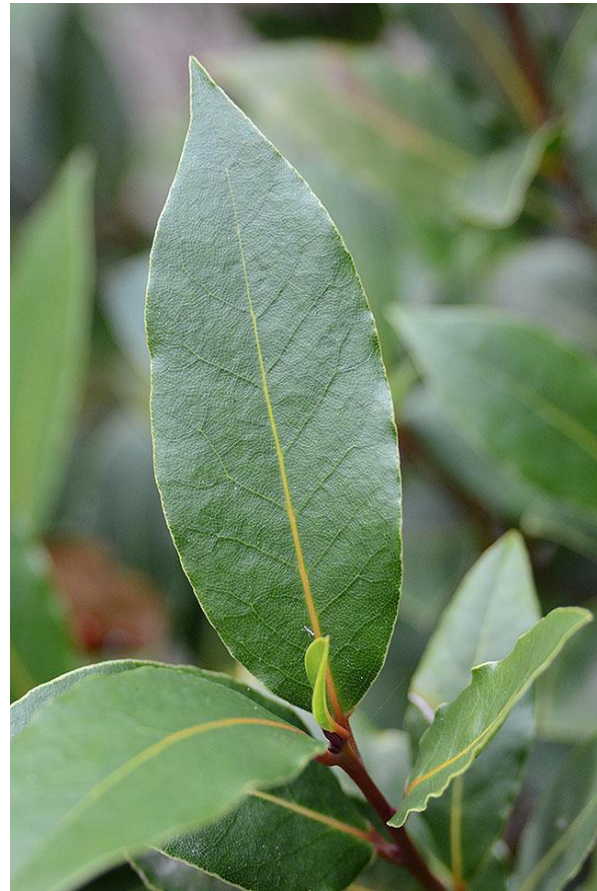


**Venation:** the arrangement of veins in a leaf.

## Types of venation

1. **Reticulate venation:** the veins and veinlets are dispersed throughout the whole lamina in certain leaves, producing a network. including:



**Pinnately R. V.**  
*Myrtus*



**Palmately R. V.**  
**(Divergent)**  
*Malva*



**Palmately R. V.**  
**(Convergent)**  
*Melastoma*

**2- Parallel venation:** The veins are distributed in a parallel way including:



**Pinnately P. V.**  
*Musa*



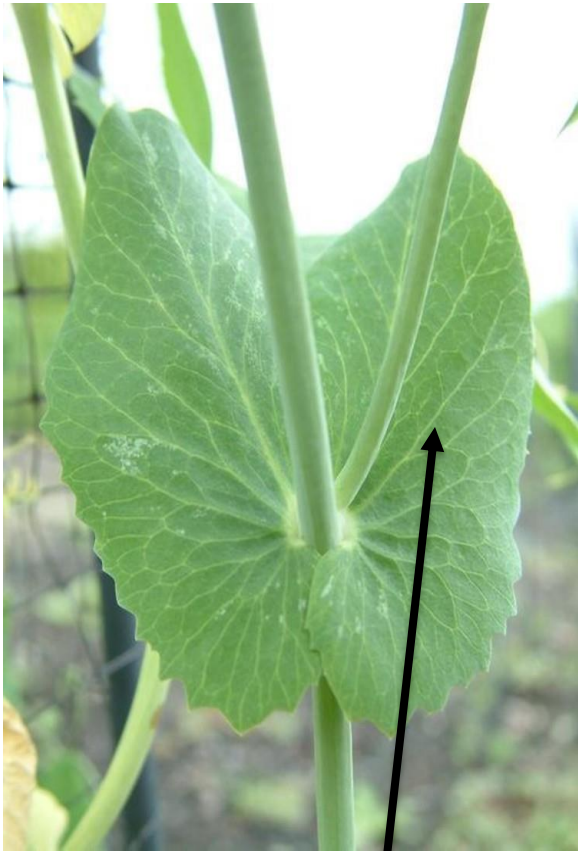
**Palmately P. V.**  
**(Divergent)**  
*Washingtonia*



**Palmately P. V.**  
**(Convergent)**  
*Plantago*

**Stipules** : an outgrowth borne on both sides (sometimes on just one side) of the base of the leaf stalk (the petiole).

## Types Of Leaf Stipules



Leafy stipule  
*Pisum sativum*



Adnate stipule  
*Rosa*

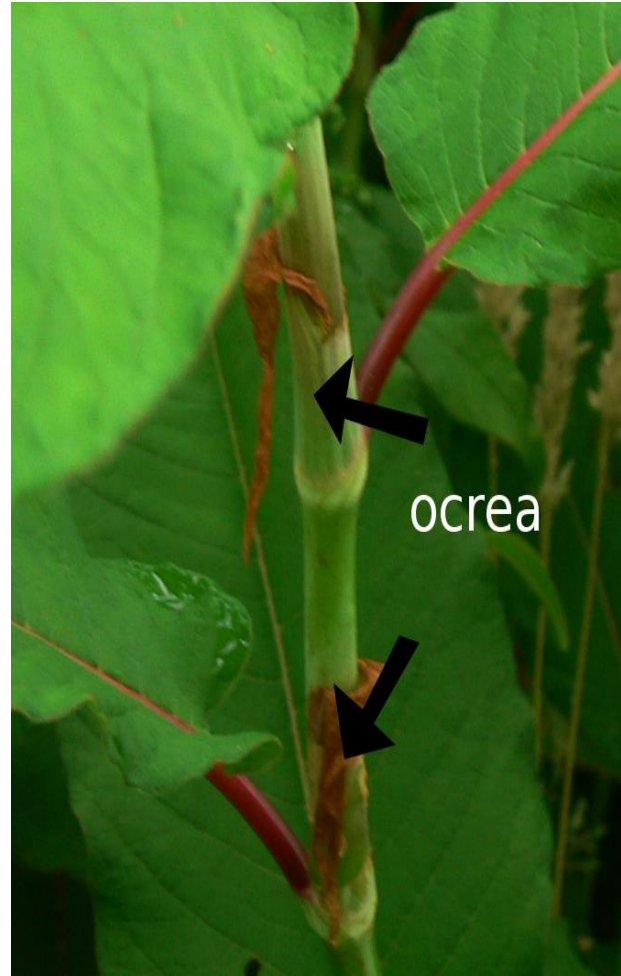


Scaly stipule  
*Morus*

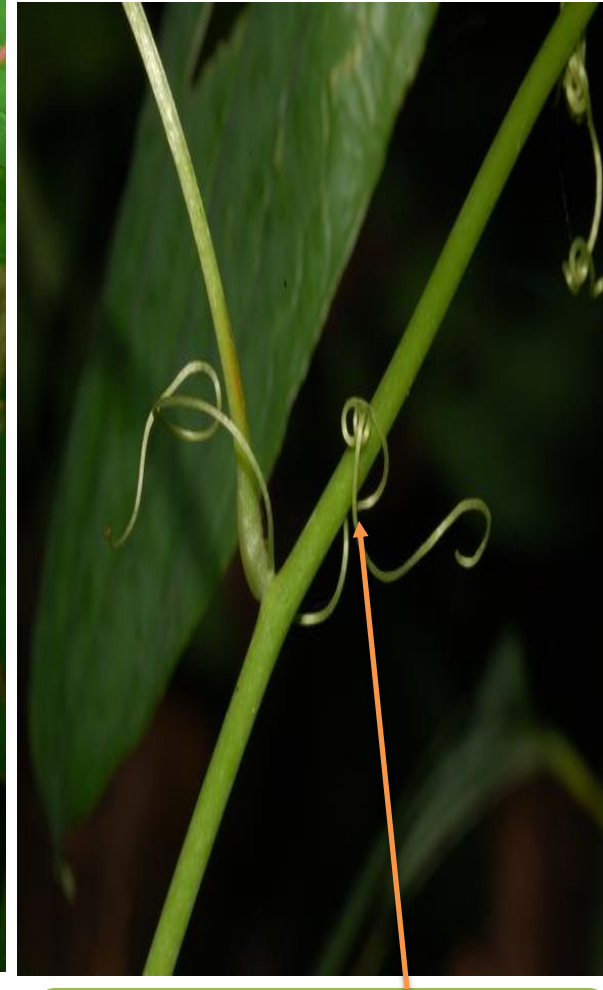
# Types Of Leaf Stipule



Spinose stipule  
*Capparis*



Ochreate stipule  
*Polygonum*



Tendriller stipule  
*Smilex*

# Modification of leaves

1- Storage leaves... *Allium cepa*

2- Spines..... *Opuntia*

3- Tendril.... *Pisum sativa*



Modification of leaf  
1- Storage leaves  
*Allium cepaa*



Modification of leaf  
2- Spines  
*Opuntia*



Modification of leaf  
3- Tendril  
*Vicia*



**Modification of leaf**  
4- Scale leaves  
*Asparagus*



**Modification of leaf**  
5- Insectivorous leaves  
*Nepenthis*



**Modification of leaf**  
6- Bract leaves  
*Alcea*