

Geophytes

an inclusive term for species that produce a modified underground structure used to store food and adapted to survive harsh environmental conditions.

	Characteristics	Basal Plate	Tunic	Reproduction	Growth	Examples
True Bulbs	tunicate bulbs are enclosed by modified leaves, imbricate bulbs have fleshy scales and no tunic, can live for many years	Yes	Only tunicate bulbs	bublets, off-sets from lateral buds near basal plate	Vertical	Alliums Amaryllis Camassia Fritillaria Hyacinthus Iris (some) Lillium Narcissus Tulipa
Corms	solid structure, no overlapping scales like in a bulb, swollen stem base, growing point	Yes	Yes, very thin	new corms form on the top, replace the depleted "mother" corm, cormels can be produced at the base	Vertical - upright growth	Crocsmia Crocus Freesia Galdiolus
Rhizomes	fleshy, thickened stems w/ roots growing on the underside and new growth emerging from the ends	None	None	each horizontal portion develops roots and a shoot of its own	Horizontally on the surface or barely underground	Anemone (some) Canna Convallaria Iris (many)
Tubers	swollen underground stems, roots grow from the base, have several growing points protruding from the top, don't make offsets	None	None	usually just grow bigger, making more buds	Vertical	Anemone (most) Begonia Cyclamen
Tuberous Roots	holds storage of nutrients in fleshy roots, joined at a stem at the base called a "crown"	None	None	each horizontal portion develops roots and a shoot of its own, stem contains growing points for next year	Vertical	Alstroemeria Clivia Dahlia Hemerocallis Ranunculus