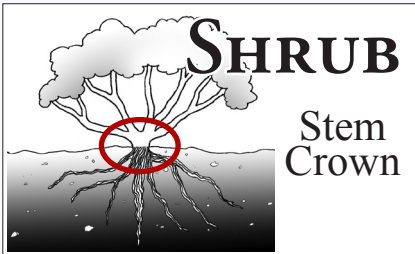


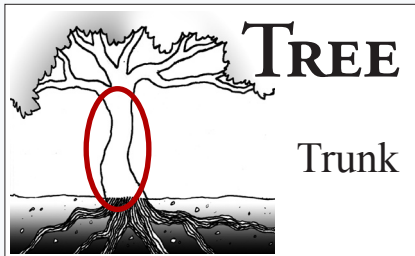
KEY CODES & DEFINITIONS

STEM CROWN OR TREE TRUNK?

A plant that branches *at* ground level is called a **shrub**, no matter how tall it grows. The *main stem* of the shrub is called a "stem crown."

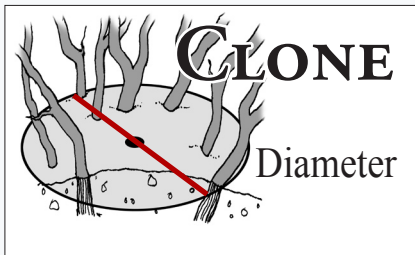


A plant that branches *above* ground level is called a **tree**, no matter how large or small. The *main stem* of the tree is called a "trunk."



HOW DOES A CLONE FORM?

Clone is defined as: "a genetically identical assemblage of individuals derived from a single plant by vegetative reproduction." As the plant ages, it develops an expanding ring of identical shoots. These shoots eventually become separate plants, or *clones*. The diameter of the *clonal ring* can be used to estimate the age of the plant.



Focus Plants	Required Measurements									
	Height	Plant Diameter	Circum. of trunk or stem crown	Diameter of trunk or stem crown	# of Live Stalks	# of Dead Stalks	# of Branch Tips	# of Pads	Average diameter across plant's outermost branches at ground level	No known aging system
Blackbrush	✓	✓	✓	✓						
Bigberry Manzanita	✓	✓	✓	✓						
California Buckwheat	✓	✓	✓	✓						
California Juniper	✓	✓	✓	✓						
Catclaw Acacia	✓	✓	✓	✓						
Creosote	✓	✓	✓	✓					✓	
Desert Willow	✓	✓	✓	✓						
Holly-leaf Cherry	✓	✓	✓	✓						
Honey Mesquite	✓	✓	✓	✓						
Ironwood	✓	✓	✓	✓						
Jojoba	✓	✓	✓	✓						
Joshua Tree	✓	✓	✓	✓			✓			
Mojave Yucca	✓	✓	✓	✓	✓	✓	✓		✓	
Mormon Tea	✓	✓	✓	✓						
Nolina	✓	✓	✓	✓	✓	✓	✓			✓
Paperbag Bush	✓	✓								✓
Pinyon Pine	✓	✓	✓	✓						
Scrub Oak	✓	✓	✓	✓						
Cactus (specify type)	✓	✓	✓	✓				✓		✓

TIMEREADER cards (age estimation templates) are calibrated to the growth rates of long-lived desert plants, which by nature grow very slowly. The size of a plant's trunk or stem crown has been correlated to its age on its corresponding **TIMEREADER**.

TimeReader Applications	
100 year TimeReader	California Buckwheat
200 year TimeReader	Mormon Tea, Catclaw, Desert Willow, Jojoba, Blackbrush
400 year TimeReader	Pinyon Pine, Manzanita, Hollyleaf Cherry, Mesquite
600 year TimeReader	Juniper, Ironwood, Scrub Oak

Metric Conversions

1 in. = 2.54 cm 1 cm = 0.39 in. ($\frac{3}{8}$ "
 1 ft. = 30.48 cm 1 m = 39.37 in. ($39 \frac{3}{8}$ "
 1 ft. = 0.31 m 1 m = 3.28 ft. ($3 \frac{3}{8}$ "

Terrain Codes

F	Flat
S	Slope
W	Wash
R	Roadside

Age Estimate Method Codes

T	Time Reader Card
C	Clonal Ring Calculation
B	Core Bore