

# How to Tame Your Botanical Gift Collection (and Have Fun in the Process)

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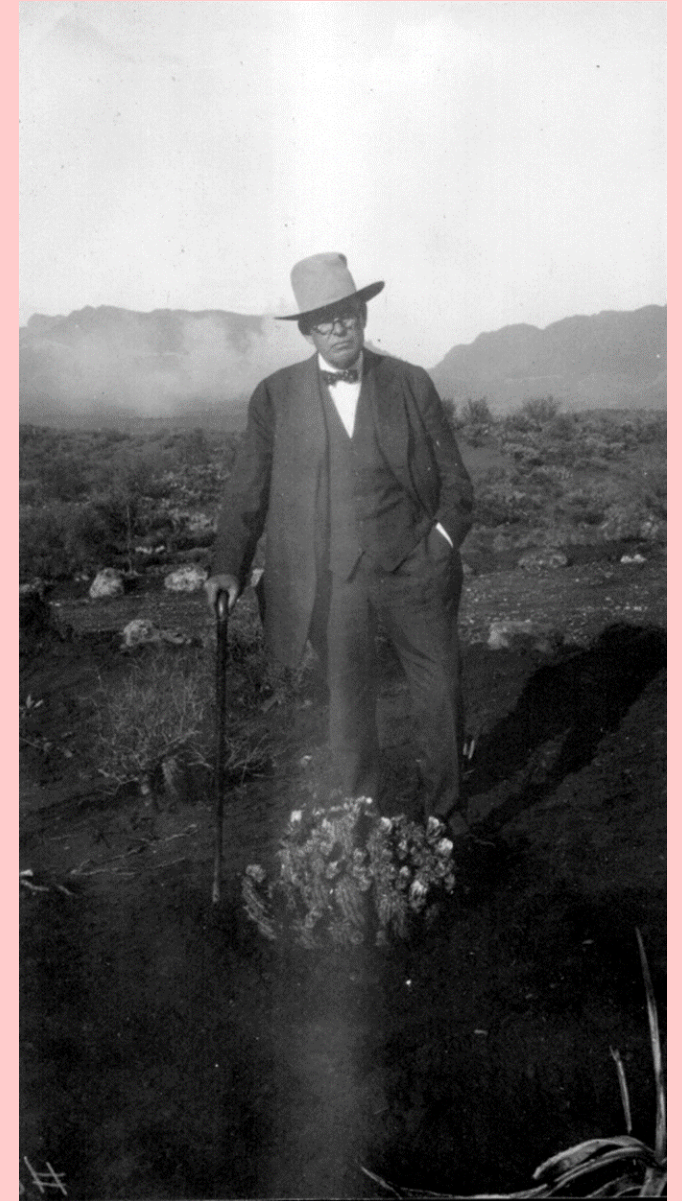






# Henry B. (H.B.) Wallace

- Third generation agriculturist who acquired substantial wealth through the breeding of chickens for commercial egg laying production.
- Retired to Arizona from Iowa in the mid-1980's where he developed his passion for cacti and other desert plants from around the world.
- Over the next 20 years he acquired specimens from commercial nurseries, private collections, horticulturists, scientists, and from the Boyce Thompson Arboretum's Desert Legume Program.
- As the collection grew, several lots in the Sincuidados neighborhood of north Scottsdale were purchased totaling 16 acres. The property also included his private residence and would eventually be known as the Wallace Desert Gardens.



# Wallace Desert Gardens

- H.B. Wallace passed away in 2005, leaving an endowment to fund Wallace Desert Gardens (WDG) in perpetuity. The economic decline of 2007 led to loss of the endowment's value, leaving the Garden and its collection in peril.
- The WDG Board of Directors made inquiries about the relocation of the collection as it could not remain in its current location. BTA along with other reputable organizations offered sanctuary for these plants, however the WDG board voted to approve BTA as the recipient of the Wallace Desert Garden Collection and a relocation agreement was signed in October 2014.



## **Boyce Thompson Arboretum has received a gift collection of over 5000 arid-land plants**

- Donor's main expectation for recipient of collection is to create a new garden in the park showcasing the Wallace collection and to build a whole new trail system for the majority of the Wallace plants
- Project of this scale has likely not been attempted before – several challenges to overcome
- Addition of a very large collection to an existing collection provides many opportunities for conservation of germplasm
- Collection will benefit community by improving visitor experience

## CHALLENGES:

- Plant identity data
- Making room for plants in collection (including clearing location of existing vegetation)
- Terrain, in terms of initial planting and installation of irrigation, and flooding potential
- Moving plants 75+ miles
- Finding location to store plants
- Salvaging plants from Wallace location at right time and planting at BTA at right time of year
- Keeping plants alive in boxes
- Installation of new well
- New irrigation
- Hiring new staff
- Securing additional funding





Chart1 **Accessions** Legend Plants (+)



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	B	C	D	E	F	G	H	I	J	K	L
1	Acc date	Name Num	Lineage num	Recd as	pSource #	pSource name	Source acc #	Genus	Species	Var_Cv_Ssp	Recd notes (Comments_1)
5085	9/8/2015	8218	2015.0617	Trichocereus 'Imperialis'	420	WDG	1289.07	Echinopsis	Imperialis'		
5086	9/8/2015	8218	2015.2103	Trichocereus 'Imperialis'	420	WDG	6.350	Echinopsis	Imperialis'		
5087	9/8/2015	8218	2015.2648	Trichocereus 'Imperialis'	420	WDG	191.040	Echinopsis	Imperialis'		
5088	9/8/2015	8218	2015.4159	Trichocereus 'Imperialis'	420	WDG	79.15	Echinopsis	Imperialis'		
5089	9/8/2015	8218	2015.4872	Trichocereus 'Imperialis'	420	WDG	106.06	Echinopsis	Imperialis'		
5090	9/8/2015	6867	2015.4833	Trichocereus lamproch	420	WDG	105.25	Echinopsis	lamprochlora		poor condition
5091	9/8/2015	6863	2015.3441	Trichocereus lecoriens	420	WDG	261.00	Echinopsis	ferox		
5092	9/8/2015	7870	2015.2404	Trichocereus longisetu	420	WDG	171.030	Echinocereus	longisetus	ssp. delaetii	
5093	9/8/2015		2015.0792	do not accession-des	420	WDG	1056.03	Trichocereus	lucernatus	(not a valid name)	Matt needs to look at I need to see the plant -MJ
5094	9/8/2015		2015.1132		420	WDG	1388.00	Trichocereus	lucernatus	(not a valid name)	Matt needs to look at I need to see the plant -MJ
5095	9/8/2015	8300	2015.1140	Trichocereus lucernatu	420	WDG	1388.09	Echinopsis	Antimatter'		tag says "Echinopsis 'Antimatter' ", correct? Probably a cult
5096	9/8/2015	8300	2015.1151	Trichocereus lucernatu	420	WDG	1388.25	Echinopsis	Antimatter'		tag says "Echinopsis 'Antimatter' ", correct? Probably a cult
5097	9/8/2015	8300	2015.1152	Trichocereus lucernatu	420	WDG	1388.26	Echinopsis	Antimatter'		tag says "Echinopsis 'Antimatter' ", correct? Probably a cult
5098	9/8/2015	8300	2015.1153	Trichocereus lucernatu	420	WDG	1388.27	Echinopsis	Antimatter'		tag says "Echinopsis 'Antimatter' ", correct? Probably a cult
5099	9/8/2015	8300	2015.1154	Trichocereus lucernatu	420	WDG	1388.28	Echinopsis	Antimatter'		tag says "Echinopsis 'Antimatter' ", correct? Probably a cult
5100	9/8/2015		2015.2202		420	WDG	13.070	Trichocereus	lucernatus	(not a valid name)	Matt needs to look at I need to see the plant -MJ
5101	9/8/2015		2015.5392		420	WDG	669.06	Trichocereus	lucernatus	(not a valid name)	Matt needs to look at I need to see the plant -MJ
5102	9/8/2015	7883	2015.2146	Trichocereus macrogo	420	WDG	10.080	Echinopsis	macrogon		
5103	9/8/2015	7883	2015.2800	Trichocereus macrogo	420	WDG	208.00	Echinopsis	macrogon		
5104	9/8/2015	7883	2015.4887	Trichocereus macrogo	420	WDG	108.03	Echinopsis	macrogon		correct tag?
5105	9/8/2015	7883	2015.5735	Trichocereus macrogo	420	WDG	144.140	Echinopsis	macrogon		
5106	9/8/2015	2196	2015.0240	Trichocereus montanu	420	WDG	1175.00	Stetsonia	coryne		
5107	9/8/2015		2015.3489		420	WDG	281.00	Trichocereus	montanus	cactus lexicon	
5108	9/8/2015		2015.3878		420	WDG	548.00	Trichocereus	montanus	cactus lexicon	
5109	9/8/2015		2015.1890		420	WDG	1567.01	Trichocereus	neolamprochlorous	email Matt	no such Echinopsis or Trichocereus I need to see the plant
5110	9/8/2015	6122	2015.0825	Trichocereus pachanoi	420	WDG	1066.00	Echinopsis	pachanoi		columnar cactus
5111	9/8/2015	6122	2015.1360	Trichocereus pachanoi	420	WDG	835.07	Echinopsis	pachanoi		
5112	9/8/2015	6122	2015.1492	Trichocereus pachanoi	420	WDG	1434.00	Echinopsis	pachanoi		
5113	9/8/2015	6122	2015.1648	Trichocereus pachanoi	420	WDG	21.07	Echinopsis	pachanoi		
5114	9/8/2015	6122	2015.1741	Trichocereus pachanoi	420	WDG	134.00	Echinopsis	pachanoi		
5115	9/8/2015	6122	2015.1857	Trichocereus pachanoi	420	WDG	965.00	Echinopsis	pachanoi		tall, columnar cactus
5116	9/8/2015	6122	2015.2434	Trichocereus pachanoi	420	WDG	174.040	Echinopsis	pachanoi		



# WALLACE EXHIBIT

BOYCE THOMPSON ARBORETUM



0' 40' 80' 120' 160'



OCTOBER 2016



- Brush clearing and chipping to make way for new Wallace trail system – clearing of location





- Terrain is very rugged in many places and provides challenges not only for initial planting of specimens but additionally for installation of irrigation
- Heavy rain can produce light flooding in creek where new trails will cross
- Bridge over creek is to be built at one end of Wallace garden







- Moving plants 75+ miles is quite a challenge

Boyce Thompson hired a very reputable company that specializes in plant salvage and relocation. Native Resources International of Phoenix has done an excellent job in bringing the plants from Scottsdale to our location in Superior, as well as setting up the necessary irrigation lines for the large boxed plants.





- Locations to store plants

- Picket Post nursery

- approx. 10 acres of large boxes, 3 shadehouses with small cacti and succulents, & area with saguaros and barrel cacti

- West End nursery

- approx. ½ acre of large boxes, 2 shadehouses with small cacti and succulents







- Salvaging plants from Wallace and planting at BTA need to occur at the right time of the year to maximize chance of plant survival

Depends on type of plant & season

- Native Resources is very knowledgeable about desert plant species
- Salvage timing and boxing schedule determined by BTA Director of Horticulture, Cathy Babcock, and Native Resources Project Mgr. Maurice Bosc

Example:

Ironwood (*Olneya tesota*)

- Specimens need to be salvaged and boxed in the summer



- Keeping plants alive in boxes
  - water
  - regular plant checks
  - combining like plants together (similar irrigation requirements)





- Installation of new well







- New irrigation will be a challenge especially hiding it in rocky areas



- Hiring new staff will likely be necessary in a project of this scale (Derek, Lisa, and Miguel were hired as additional full-time staff members)





- Securing additional funding is absolutely critical when taking on and working on a project of this scale

In addition to the Wallace endowment, BTA has and is currently soliciting donations through our own membership and special interest donors as well as grants.



## BENEFITS/OPPORTUNITIES:

- Conserving germplasm
  - adding unique taxa to collection
  - potential to become research center of arid-land plants
- Expanding visitor experience
  - increased plant diversity
  - new areas to explore (adding 1 mile of trail to 3 miles of existing trails)
  - increased educational programming
  - increased numbers of tours offered to public





*Ephedra distachya*  
(2015.3723-1)

- The ability to conserve germplasm by adding unique taxa to BTA collection is very important

Example:

- *Ephedra* collection from WDG thought to be the most comprehensive collection of New World *Ephedra* in the world



*Ephedra funerea*  
(2015.3774-1)



## Number of *Ephedra* species specimens in BTA collection before and after integration with Wallace Garden collection

- Addition of unique taxa has potential to enable BTA to become a research center of arid-land plants

Taxon	Original Count	Count with Wallace
<i>Ephedra antisiphilitica</i>	1	2
<i>Ephedra aspera</i>	0	5
<i>Ephedra boelckeii</i>	0	2
<i>Ephedra breana</i>	0	2
<i>Ephedra californica</i>	0	1
<i>Ephedra chilensis</i>	0	1
<i>Ephedra coryi</i>	0	3
<i>Ephedra cutleri</i>	0	2
<i>Ephedra distachya</i>	0	1
<i>Ephedra distachya ssp. helvetica</i>	0	1
<i>Ephedra equisetina</i>	0	2
<i>Ephedra fasciculata</i>	0	1
<i>Ephedra foeminea</i>	0	2
<i>Ephedra funerea</i>	0	5
<i>Ephedra gerardiana</i>	0	1
<i>Ephedra intermedia</i>	2	3
<i>Ephedra x intermixta</i>	0	1
<i>Ephedra major</i>	0	1
<i>Ephedra monosperma</i>	0	1
<i>Ephedra nevadensis</i>	0	7
<i>Ephedra regeliana</i>	0	1
<i>Ephedra sinica</i>	0	1
<i>Ephedra torreyana</i>	0	4
<i>Ephedra triandra</i>	0	5
<i>Ephedra trifurca</i>	0	3
<i>Ephedra viridis</i>	1	4
Total:	4	62



- Expanding visitor experience is a benefit we hope to see by having the Wallace collection

- New areas to explore (adding 1 mi. of trail)



- Increased educational programming



- Increased plant diversity (*Sisymbrium sparteum*)

- Increased numbers of tours offered to the public





Special thanks to those whose tireless efforts on the  
Wallace Desert Garden project have made this all possible:

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