

Huntsville Botanical Garden: Trillium Research and Trillium Gardens

by
Harold Holmes
Holmes Trillium Research

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<p>HUNTSVILLE BOTANICAL GARDEN</p> <p>Trillium Research and Gardens</p> <p>and Approval: 2006</p> <p>•Trillium Gardens Grand Opening: 2007</p> <p>•Trillium Collections Enhanced and Validated: 2008</p> <p>•HTR Research Transition to HBG:2007-08</p>  	<p>Trillium Gardens & Collections</p> <p>HBG Trillium Garden Summary: <i>An education and display garden with 8 major collections displaying over 1000 Trillium and over 80 select Trillium forms.</i></p> <ul style="list-style-type: none"> • Trillium Education Gardens: • Missouri Trillium Collection: • General Trillium Collection: • Select Trillium Collection: • Select Area Collection: • Native Area Collection: • Propagation Demonstration Collection: • Trillium Garden Nursery Collection: 	<p>Trillium Research</p> <p>HBG Trillium Research, Education and Conservation Summary: <i>A research, education and conservation program to enhance the HBG Trillium Collection and Trillium as a National Treasure.</i></p> <ul style="list-style-type: none"> • Trillium Propagation Research Program: • Trillium Peduncle Nursery: • Trillium Education Program: • Trillium Conservation Program: • Trillium Hybridization Program: • Trillium Field Research: • Trillium Digital Imaging and Data Program: 
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Trillium Education Garden

Features the Trillium species that are native to the eastern United States
Family: Trillaceae, genus: Trillium, subgenus: Trillium (pachifolus - White-Robin) and Phloxiflorum (sessile - ToothPoke)




Trillium Education Garden


- Trillium Education Garden
- Trillium Collection Beds
- Propagation Demonstration Beds
- Native Trillium Plantings
- Companion Wildflowers



White-Robin (pachifolus) Trillium



ToothPoke (sessile) Trillium



A Nature's Trillium Display

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National Trillium Collection Garden

Features General and Select Trillium Collections and Trillium Propagation

Family: Trillaceae, genus: Trillium, subgenus: Trillium (pachifolus - White-Robin) and Phloxiflorum (sessile - ToothPoke)



National Trillium Collection Garden

- Trillium Collection Beds
- Propagation Demonstration Beds
- Native Trillium Plantings
- Companion Wildflowers



A "Select Collection" Trillium



Trillium Propagation at Work



A Nature's Trillium Display

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HUNTSVILLE BOTANICAL GARDEN

Trillium Research and Gardens

Trillium Gardens & Collections

HBG Trillium Garden Summary: An education and display garden with 8 major collections displaying over 1000 Trillium and over 80 select Trillium for us.

- Trillium Education Garden:
- Memorial Trillium Collections:
- General Trillium Collections:
- Select Trillium Collections:
- Select Area Collections:
- Native Area Collections:
- Propagation Demonstration Collections:



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Trillium Collections are in rock lined raised beds planted in a specially formulated mix in the west side of the Huntsville Botanical Garden's fabulous Nature Trail.



HUNTSVILLE BOTANICAL
GARDEN
Trillium Gardens

Trillium Gardens are Sleeping

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Trillium Collections are in rock lined raised beds planted in a specially formulated mix in the west side of the Huntsville Botanical Garden's fabulous Nature Trail.



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Trillium Gardens are Awake

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Trillium Gardens

Trillium Gardens are Awake

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Katharine Simmons Memorial Collection: Features over 250 Trillium, 19 species and many select and special forms.



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Memorial Trillium Collection: I

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Frank E. Hodges Memorial Collection: Features over 200 Trillium, 12 species and many select and special forms.



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Memorial Trillium Collection: II

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General Trillium Collections: Contains 13 collections donated by individuals with over 21 species, over 700 Trillium and many special forms.



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General Trillium Collections:

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Select Trillium Collections: Contains up to 200 (currently 83) select and special candidate Trillium forms judged worthy of preservation, including many of the Don Jacob's "ECC" Trillium.



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Select Trillium Collections: I

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Select Collections: Features over 80 Trillium to be judged worthy for gene preservation.



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Select Trillium Collections:

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Select Trillium Collections:
Trillium cuneatum, 'Ooonee Lemon'

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Select Collections: *Fastem*; over 80 Trillium to be judged worthy for gene preservation.



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Trillium Gardens

Select Trillium Collections: II

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Don L. Jacobs "ECO" Trillium Collection:




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Trillium Gardens

Select Trillium Collections: III

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Diverse Forms: Swamp (quad) and Mountain (center)



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Trillium Research

Trillium pusillum, var. *Alabamaicum*
Photograph: 13-23 March 2006 & 10 April

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Select Area Collections: *T. flexipes*, *T. auturum*, *T. rubicatum*, *T. stamineum*, *T. discumbens*.



T. flexipes *T. auturum*
T. submichxum *T. decumbens*

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Select Area Collection:

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Select Area Collection: *Trillium Cuneatum*:

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Propagation demonstration: Display of different Trillium propagation techniques



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Trillium Propagation Demonstration Collection: I

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FB01: 2003 Propagation - 2007 Evaluation:
Top: Vegetative (Decapitation) Propagation
Bottom: Seed Propagation



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Trillium Garden

Trillium Propagation Demonstration Collection: II

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Trillium Research and Gardens

Trillium Research

HBG Trillium Research, Education and Conservation Summary: *A research, education and conservation program to enhance the HBG Trillium Collection and Trillium as a National Treasure.*

- Trillium Propagation Research Program:
- Trillium Production Nursery:
- Trillium Education Program:
- Trillium Conservation Program:
- Trillium Hybridization Program:
- Trillium Field Research:
- Trillium Digital Image and Data Program:



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Vegetative Propagation Example: 45 offsets on 1 fractured rhizome



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Trillium cuneatum, 'Madison'
Offsets forced in nature March 2003
Rhizome fractured by tree roots

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Vegetative Propagation: Examples with 11 offsets per rhizome section



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Trillium maculatum Rhizome:
Decapitation May 2007
Photograph 29 January 2008

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Vegetative Propagation: Example where some rhizome slices decompose.



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Trillium cuneatum Rhizome:
Decapitation March 2006
Photograph 31 January 2008

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Vegetative Propagation: 5 large rhizomes decapitated and cut produced 33 offsets



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Trillium cuneatum rhizome slices:
Decapitation March 2006
Photograph 31 January 2008

EX-08-10-2006
T. FLEXIPES • 5 VTB SOC.
5 DECAP GIANT • 11 VRB SEC
• 33 VRB • 33 OFFSETS

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Vegetative Propagation: Decapitation: May 2005, Photo: September 2006



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Vegetative Propagation: 14 small decapitated rhizome produced 55 offsets



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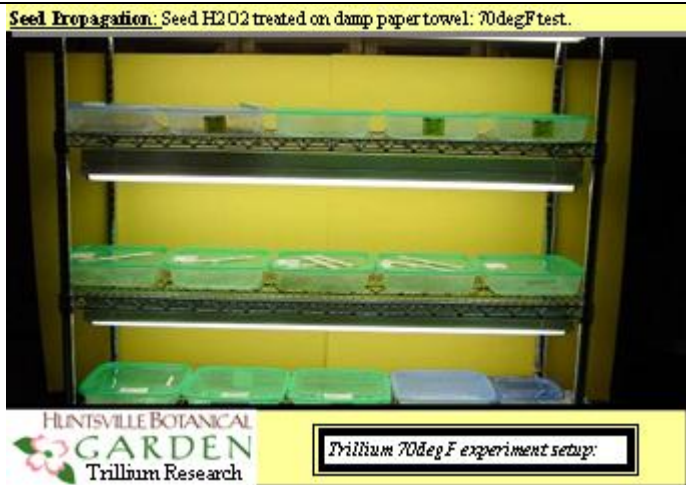
Vegetative Propagation: Giant Decapitated rhizome produced 24 offsets



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Seed Propagation: Sessile Trillium Skipping double dormancy (% true leaves)

T. decipiens: 50% *T. maculatum*: 75%

2008 Seed dormancy Test Bed (20'x4') *T. maculatum*: 75%

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Sessile Trillium Dormancy Skipping Experiments
Seed planted: June 8-15, 2004
Photo graph: February 17, 2008

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Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.

RELIQUUM
- 12 July 2005
- 2 Jan 2006

HUNTSVILLE BOTANICAL GARDEN Trillium Research

Trillium reliquum:
70degF: 12 July 2005
Photo graph: 27 January 2006

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Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.

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Trillium reliquum:
70degF: 12 July 2005
Photo graph: 27 January 2006

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Seed Propagation: Seed H₂O₂ & GA₃ treated on damp paper towel: 70degF test.



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Trillium Research

Trillium reliquum: GA₃ Test
70degF: 12 July 2005
Photograph: 2 January 2006

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Seed Propagation: Seed H₂O₂ & GA₃ treated on damp paper towel: 70degF test.



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Trillium reliquum: GA₃ Test
70degF: 12 July 2005
Photograph: 21 February 2006

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Seed Propagation: Seed H₂O₂ & treated on damp paper towel: 70degF test.



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Trillium luteum:
70degF: 20 September 2005
Photograph: 2 January 2006

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Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.



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Trillium decepiens
70degF: 20 September 2005
Photograph: 2 January 2006

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Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.



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Trillium cuneatum
70degF: 20 September 2005
Photograph: 2 January 2006

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Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.



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Trillium Research

Trillium cuneatum, "aff. ludo"
70degF: 20 September 2005
Photograph: 2 January 2006

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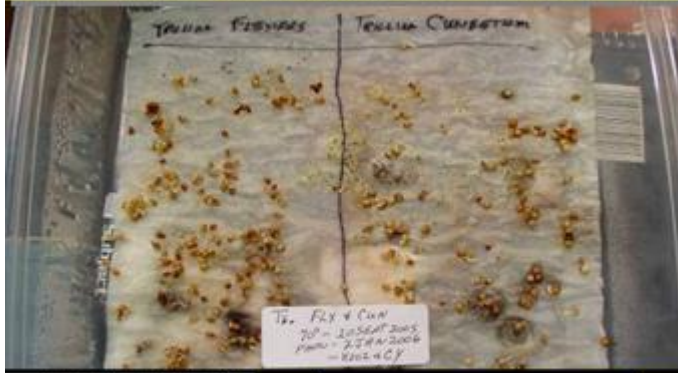
Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.



Trillium flexipes:
70degF: 20 September 2005
Photograph: 2 January 2006

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Seed Propagation: Seed H₂O₂ treated on damp paper towel: 70degF test.



Trillium: Fungus?? (3 kinds)
70degF: 20 September 2005
Photograph: 2 January 2006

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Native Population: South Carolina



Trillium Conservation Program
Trillium discolor: Pale Yellow Toadshade

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Native Population: North Alabama



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Trillium Conservation Program
Trillium flexipes: Bent Toadshade

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A Few Diverse Trillium Forms: (ALWFS: Gardens in Opelika, AL)



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Trillium Field Research
Photograph: 6-8 April 2006

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Trillium Education Garden
Photograph: 27 February 2008

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2004 *Trillium reliquum* Experiment: 2008 Evaluation: 32 Blade Leaves - +8 True Leaves



HUNTSVILLE BOTANICAL GARDEN Trillium Gardens

Trillium Seedlings
Photograph: 27 February 2008

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Trillium propagation research and production nursery beds and containers:



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Trillium Production Nursery:

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Trillium propagation research and production nursery beds and containers:



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Trillium Production Nursery:

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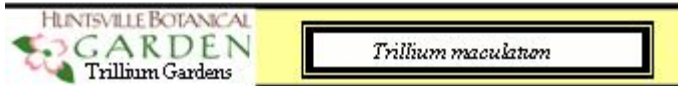
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Left Photo taken 5 Feb 2008 ----Right Photo taken 7 Feb 2008
Plant is same plant, a *Trillium maculatum*.
Note the petal color change in the 2 days.



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Trillium Cuneatum: Sweet Betsy Select
Form: 'Oconee Lemon'

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Trillium Cuneatum: Sweet Betsy
aff. ludo

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*Trillium Stamineum: Twisted Toadshade
'John's Giant'*

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*Trillium Stamineum: Twisted Toadshade
Photo by Jerry Green*

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*Trillium Rugelii: Southern Nodding Wake-Robin
'Billie's All White'*

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*Trillium Cuneatum: Sweet Betsy
'Billie's Gold'*

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Trillium Cuneatum: Sweet Betsy