



— NORTH TEXAS NATIVE GENETICS EXPEDITION

Documenting, Understanding, and Preserving the *Ecological Heritage* of North Texas

PROJECT SCOPE

Led by The Tree Museum of Dallas, this initiative documents remnant prairies and woodlands across North Texas through seasonal field surveys, detailed species inventories, and geo-tagged photographic monitoring. Field teams will collect plant tissue samples, soil cores, and seed specimens at each site, catalogued by GPS coordinates, collection date, and ecological context. All data will be stored in a structured digital archive – accessible to researchers and conservationists – with redundant cloud backups and an on-site physical record library. Collected genetic material will be preserved in a dedicated North Texas Native Genetics Vault: a temperature-controlled seed and tissue bank designed to safeguard the genetic diversity of the region's most vulnerable native species for long-term ecological restoration.

SUBMITTED BY

The Tree Museum of Dallas

PRIMARY SITE

Tandy Hills Natural Area

FIELD TEAM

5 Members



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Field Methodology for Native Genetics Surveys

— METHODOLOGY OVERVIEW

The North Texas Native Genetics Expedition conducts permit-authorized genetic and botanical surveys of remnant native ecosystems across North Texas. Field teams of 2-4 trained researchers perform 2-4 seasonal visits per site annually, following established trails and low-impact collection protocols. Participating land managers receive full data access and a written site report at the close of each survey season.

— CORE FIELD ACTIVITIES

ECOLOGICAL SURVEYS

Line-transect and plot-based vegetation surveys
· Species abundance and cover assessments ·
Habitat condition and disturbance evaluations

DOCUMENTATION

Sub-meter GPS mapping · Geo-tagged field
photography · Standardized datasheets and
digital metadata entry

SPECIMEN COLLECTION

Seed collection (≤10% per population) · Pressed
voucher specimens · Soil cores when explicitly
authorized

— COLLECTION & SITE PROTECTION PROTOCOL

- All collection uses hand tools only; no mechanical equipment or power tools are used on-site.
 - No more than 10% of available seed from any population will be collected.
 - Rare or sensitive species require explicit written authorization before any sampling occurs.
- Survey teams follow existing trails; all temporary markers are removed at the close of each visit.
 - Land managers are notified at least 72 hours in advance of each scheduled site visit.

— DATA PRODUCTS GENERATED

- ✓ Species inventories by site and season
 - ✓ Geo-tagged photographic records
 - ✓ GPS collection coordinates and site maps
- ✓ Habitat condition assessments
 - ✓ Seasonal monitoring records
 - ✓ Native genetic accession records with vouchers

— BENEFITS TO PARTICIPATING ORGANIZATIONS

- Annual species inventories in GIS-compatible format
 - Long-term ecological monitoring records
 - Habitat condition documentation and trend summaries
- Full access to all collected survey data and field notes
 - High-resolution photographic archive of all surveyed areas
 - Invasive species and site condition alerts following each visit

— LONG-TERM PRESERVATION

Collected genetic material is accessioned into the North Texas Native Genetics Vault under controlled conditions with documented chain of custody. Field records, photographs, and metadata are maintained in a redundant digital archive managed by The Tree Museum of Dallas. Partner organizations retain perpetual access to all data generated from their properties.