

# LAETOLI

HOMINID TRACKWAY, SITE G

# CONDITION RECORDS

G1 AND G2/3 FOOTPRINTS

THE GETTY CONSERVATION INSTITUTE

Laetoli Project August 2001 © J. Paul Getty Trust

# Laetoli Project CONDITION RECORDS OF G1 AND G2/3 PRINTS

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#### 1. OVERVIEW OF CONSERVATION RECORDING OF THE LAETOLI FOOTPRINTS

#### Introduction

A key component of the conservation program for the Laetoli trackway was comprehensive graphic documentation of the exposed trackway (for greater detail on the conservation program and other aspects of the joint Getty Conservation Institute-Tanzanian Dept. of Antiquities project to conserve the Laetoli trackway, see the Reports on the 1995 and 1996-1998 Field Seasons). The purpose of the graphic recording was to establish baseline documentation for assessing any change in the future, to assist in determining causes of deterioration, and to record location and type of conservation intervention treatments to the trackway. The major part of the southern sector of the trackway (approximately 9m of trackway surface) was recorded in 1995; in 1996, the remaining 1.50m of the southern sector, the middle sector and the northern sector (20m of trackway surface in total) were recorded (see Figs 3-8 for trackway sectors). Condition and intervention recording were major components of the conservation program throughout both field seasons.

# Methodology and objectives of graphic documentation

Condition recording was carried out on site by the conservation team using 8 x 10 in. color Polaroid photographs of the trackway. The reason for selecting Polaroids was the need to generate photographs for immediate use in the field (the remote location precluded convenient film development). The formal, archival photography of the prints was done with 2.25 in. (6cm) medium-format and 35mm photography. The condition information was not transferred later to these formal photographs because of the time at which they were taken (after all cleaning and treatment of the footprints) and because the introduction of errors would have occurred in transferring information to another photograph.

The 8 x 10 Polaroids were taken of each print before treatment; that is, after re-excavation and initial cleaning, and in some cases, after initial root cutting, but before most other interventions and final cleaning. The Polaroids were then placed below transparent sheets of Mylar, and the physical condition of the tuff was recorded on the sheet using a series of symbol and color conventions. Written notes were taken to supplement the graphic information. In addition, the re-excavated prints were compared with photographs and casts (when available) taken in 1978-79 and observations on changes in appearance and condition were recorded.

Conservation interventions, such as consolidation or reattachment of tuff, and root treatment, were also recorded on sheets over the Polaroids. There is not always a correspondence between the recorded conditions and the interventions because not all conditions required treatment. Some inconsistency

between individual records may exist, for instance in whether the wire frame or the Polaroid picture frame was used to define the limits of the recorded area, or whether a condition such as embedding of fill was recorded on the graphic or only in a written note. Recording of observed features inevitably involves some subjectivity and interpretation, and varying standards of accuracy between recorders; however, the objective of the graphic documentation was not the presentation per se of precise detail, but the visual mapping of conditions and interventions to assist with diagnosing causes of deterioration and to provide baseline documentation for assessing change in the future.

Polaroids were taken of the exposed trackway at two levels of magnification: close-ups of the individual hominid prints, and wide angle "fly-overs" of the remainder of the trackway surface. Only the Polaroids of individual hominid prints with their graphic record have been transferred to electronic format (see below). The fly-overs are available as original field notes and are stored at the GCI. The trackway surface is covered in 79 Polaroid fly-overs (36 taken in 1995; 43 in 1996).

Fifty Polaroids of individual prints and one Polaroid encompassing the cluster of prints (G1-6, 7, 8 and G2/3-5) near the northern end of the trackway, where the hominids appear to have broken stride, were taken for purposes of recording the condition of the prints; the 51 Polaroids cover a total of 54 hominid prints, as follows:

G1 Print Polaroids				G2/3 Print Polaroids		
G1-2	G1-14	G1-27	G1-35	G2/3-2	G2/3-16	G2/3-25
G1-3	G1-19	G1-28	G1-36	G2/3-5 [with G1-6, 7, 8]	G2/3-17	G2/3-26
G1-6, 7, 8 with G2/3-5]	G1-21	G1-29	G1-37	G2/3-6	G2/3-18	G2/3-27
G1-9	G1-22	G1-30	G1-38	G2/3-7	G2/3-19	G2/3-28
G1-10	G1-23	G1-31	G1-39	G2/3-8	G2/3-20	G2/3-29
G1-11	G1-24	G1-32		G2/3-9	G2/3-21	G2/3-30
G1-12	G1-25	G1-33		G2/3-10	G2/3-22	G2/3-31
G1-13	G1-26	G1-34		G2/3-15	G2/3-24	

Eight G1 prints and eight G2/3 prints were not recorded by individual Polaroids either because they were lost to erosion (G1-1 and G2/3-1) or because they preserved no discernible morphology; these are:

G1 Prints not recorded			G2/3 Prints not recorded			
G1-1	G1-15	G1-18	G2/3-1	G2/3-11	G2/3-14	
G1-4	G1-16	G1-20	G2/3-3	G2/3-12	G2/3-23	
G1-5	G1-17		G2/3-4	G2/3-13	-	

At the GCI, the graphic information collected in the field was reviewed, corrected where necessary, and made consistent in presentation before being transferred to electronic format (AutoCAD). The conditions and interventions are represented by separate graphic layers; there are 20 layers in total (see Legend, in Part II). In electronic format, the layers can be viewed individually or superimposed to show relationships between various conditions or between conditions and interventions. One of the layers is an approximate outline of the hominid print. The outline is intended only as a general guide to the location of the footprint (as it was defined in 1978 or 1979) and does not represent an anatomical interpretation of the print; it should not be used for scientific interpretation.

The four main categories of conditions and interventions identified are as follows:

- 1. Tuff conditions
- Conditions related to 1978-79 interventions
- 3. Root damage and insect activity
- 4. 1995-96 interventions

For the purposes of this hard-copy version of the graphic records, the condition layers for each category are printed together. Each of the conditions is defined in section 2 (Definition of Categories for Written and Graphic Condition Records).

All G1 prints in this hard-copy compilation were printed at the same scale (each segment on the wire frame defining the area of the print = 5mm), except for G1-28 (whose frame was incorrectly extended) and the Polaroid of G1-6, 7, 8 and G2/3-5, which was photographed at a different scale to capture the group of prints. The G2/3 prints are printed at a smaller scale in order to accommodate their larger size; they are all at a consistent scale, except for the Polaroid encompassing G2/3-5, as noted above.

Colors for this print-out have been uniformly adjusted to a grey tone, which does not reflect the true color of the trackway, which varies from light grey to dark brown.

Footprint lists for the G1 and G2/3 prints precede the condition descriptions and graphics for the G1 and G2/3 footprints respectively; they provide in tabular form basic information about the trackway sector, general condition, and existing documentation (casts and photogrammetric plots) for each print.

#### Written record

To supplement the graphic information, a description of the conditions and interventions exists for each print, along with contextual information about location, excavation and reburial history, the 1978-79 description of the print, and the comparison of the print in situ with the photos and casts taken in 1978-79. Only brief written records are provided for the 16 prints not graphically recorded on individual Polaroids; these record the relevant Polaroid fly-over numbers and contextual information. Basic terminology used to describe the location of conditions on or around the footprint is graphically illustrated in Figs 1-2.

The condition records are a standard part of conservation documentation; they record conditions about the state of preservation of the prints and conservation interventions to the prints. The geological and anatomical features of the prints were recorded by anatomist Bruce Latimer and geologist Craig Feibel, working under separate permit from the Antiquities Department of Tanzania. Although their descriptions of the footprints were undertaken principally for purposes of palaeoanthropological study, information on the microstratigraphy is relevant to understanding the conditions of the prints, and on the morphology to identification of the most important prints for documentation. These descriptions have yet to be published. For the compilation of this report, the field notes, where available, have been consulted.

#### Photogrammetric contour maps

A photogrammetric contour map of each recorded print accompanies the graphic and written record. These are at 1mm contour intervals. The photogrammetry was undertaken by Heinz Ruther of the University of Cape Town.

#### Personnel involved in the condition recording

Condition recording in the field was done by the joint GCI-Tanzanian conservation team, as follows:

1995

1996

Angelyn Bass Francesca Piqué Angelyn Bass

Jerry Podany Eduardo Sanchez Jesuit Temba Donatius Kamamba Francesca Piqué Leslie Rainer

Eduardo Sanchez Jesuit Temba Polaroid photography was undertaken by Tom Moon, with assistance from Frank Long in 1996.

The field records were checked and prepared for electronic transfer by Martha Demas and Angelyn Bass. Written records were compiled and fact-checked by Martha Demas and Angelyn Bass, with input from Neville Agnew.

Electronic transfer of the hard-copy field records was done by Alexia Margariti, under supervision of Rand Eppich.

#### 2. DEFINITION OF CATEGORIES FOR WRITTEN AND GRAPHIC CONDITION RECORDS

G1-1: Right/Left/Indeterminate

Inventory number of print given in 1978-79 and attribution to left or right foot. Attribution follows that of the 1978-79 descriptions as published in M.D. Leakey and J.M. Harris, Laetoli. A Pliocene Site in Northern Tanzania. Oxford Science Publications, 1987, 491-494; where attribution was not known, the print was designated as "indeterminate."

#### Location

Location of print on the Site G trackway, defined by sector of trackway:

- Southern sector of trackway (Figs 3-4)
- Middle sector of trackway (Figs 5-6)
- Northern sector of trackway (Figs 7-8)

And by 1995 or 1996 trench number (trenches 1-7).

# Excavation and Reburial History

History of excavation or exposure and reburial of each print, defined as:

- Exposed by natural weathering;
- Excavated and reburied in 1978 and/or 1979;
- Re-excavated and reburied in 1992 and 1993, for preliminary assessments of condition;
- Re-excavated and reburied in 1995 or 1996, for conservation.

# 1978-1979 Description

Description of the print from the Laetoli monograph: M.D. Leakey and J.M. Harris, Laetoli. A Pliocene Site in Northern Tanzania. Oxford Science Publications, 1987, 491-494.

#### 1995-1996 Conditions

General condition: Assessment of general condition is based on condition of the print in 1995 or 1996 relative to its condition in 1978 or 1979, as determined by in situ assessment of the 1995/96 condition compared to photographs and casts of the prints in 1978/79. Defined as exhibiting:

- Minor alteration (good condition): print shows little change from its original (1978-79) condition; loss
  of resolution (that is, fine detail) due to the presence of Bedacryl or slight weathering and minor
  embedding of particles from the overburden are the most common changes.
- Moderate alteration (fair condition): print shows moderate change from its original (1978-79) condition, generally as a result of increased weathering of tuff, embedding of particles, or root damage, or a combination of minor conditions.
- Significant alteration (poor condition): print shows significant change from its original (1978-79)
  condition, generally as a result of root damage, extensive weathering of tuff, severe embedding of
  particles, and insect activity; alteration may be the result of minor impacts by several phenomena or a
  major impact of one phenomenon.

Approximate footprint outline: The outline of the print margins on the graphic records is intended only as a general guide to the location of the footprint, which may be difficult to discern; it is **not** intended as an accurate anatomical representation of the print. No attempt has been made to distinguish the G2 and G3 prints (except in the case of G2/3-9); the outline encompasses both prints. The dashed outline of prints G2/3-15, 16 and 22 indicates a higher degree of uncertainty regarding the outline.

#### Tuff conditions:

Weathering: Tuff that is mineralogically and physically altered by natural processes; weathered tuff has a higher clay content than unweathered tuff, and is visually distinguished by its prominent network of polygonal cracks and by its darker color and coarse texture. Weathering is often characterized in the written condition record as being slight, moderate or severe. This condition was most common and severe in the northern sector of the trackway.

<u>Cracking</u>: Fine fractures or breaks in the surface of the tuff; cracking occurs primarily in the unweathered or slightly weathered tuff and is to be distinguished from polygonal cracking characteristic of weathered tuff. Cracks may contain calcite veins.

Losses: Loss of tuff as determined by lighter color, indicating a fresh break or abrasion on the surface, and by comparing the print in situ with 1978-89 casts and photographs.

<u>Detached/loose tuff</u>: Areas or fragments of tuff that were fully or partially separated from the underlying tuff; more common in areas of weathered tuff.

<u>Powdering</u>: Surface tuff that easily disintegrated with the slightest mechanical action (such as brushing); may be related to the mineralogical composition of the tuff microstratigraphy and to advanced weathering. This condition was most prevalent in the northern sector of the trackway.

Other tuff conditions: (conditions rarely encountered)

<u>Void</u>: an empty space in the tuff resulting from separation between the tuff microstratigraphy, apparently caused by penetration of root mats between layers, or, it is inferred, by other extraneous causes such as burrowing insects; usually detected by tapping the surface and hearing a hollow sound. Only found in G2/3-7 and G1-29.

<u>Disruption</u>: area of tuff where the continuity of the surface was interrupted or breached as a result of stump or root penetration or from another external force (such as a spear point in the case of G2/3-18 and 21).

L14 refers to the microstratigraphical layer in which the hominid footprints were formed; other layers below L14 are occasionally referred to in the descriptions (see 1995 Report or 1996-1998 Report for further explanation of these terms).

#### Conditions related to 1978-79 interventions:

Bedacryl conditions:

Bedacryl: A synthetic resin (polymethacrylate ester) used to consolidate and harden the prints prior to molding in 1978-79. On the southern trackway, Bedacryl was identifiable as a very distinct darkening of the tuff surface creating a halo around the print. On the northern trackway Bedacryl was identifiable primarily as "stringers," a flexible polymeric material that was visible stretched between cracks of weathered tuff.

<u>Deteriorated or missing Bedacryl</u>: Bedacryl that had disintegrated, blistered, lifted or been lost from the surface of the tuff. Distinct patches of loss of Bedacryl at the bottom of prints was found in G1-25, G2/3-18 and G2/3-30, and may be the result of removal during the molding process in 1979.

Embedding: Fine particles of sand from the 1978-79 overburden which were impressed in the tuff or in the Bedacryl layer; deeply embedded particles were not removed. The degree of embedding recorded was that encountered after the initial cleaning; subsequent cleaning of the prints often removed additional embedded particles.

Silicone: Fragments or residue of white silicone rubber from molding the trackway in 1978/79.

Excavation tool marks: Visible traces of score marks or incisions in the tuff as a result of excavation with chisel, dental pick or other implements in 1978-79. Such marks were frequently obscured by the layer of Bedacryl and embedding, but may be noted when they could be seen in 1978-79 documentation in the Comparison with 1978-79 cast/photograph section.

<u>Inventory number on tuff</u>: Inventory number of print marked on the tuff surface with permanent ink in 1979. Inventory numbers of prints excavated in 1978 were not marked on the tuff.

Other conditions related to 1978-79 interventions: (conditions rarely encountered)

Plastic fragments: Remnants of plastic sheeting, possibly from the 1978-79 reburial. These remnants may be seen mainly in the fly-over Polaroids, since they were rarely found in close proximity to the footprints.

<u>Yellow staining</u>: Localized discoloration of the tuff, from cellulose nitrate used to adhere detached tuff or consolidate the tuff surface was detected in prints excavated in 1978 (as identified by IR spectroscopic analysis of samples taken from G1-14 and G2/3-6), see also Bedacryl above. Found only on the northern trackway sector.

Root damage:

<u>Surface roots</u>: Root (>1mm diameter) or rootlet (<1mm diameter) remaining on the tuff surface after initial excavation and cleaning of the tuff. Surface roots were recorded since they were visible at the time of recording; some left impressions in the tuff and were recorded accordingly. All surface roots were later removed.

Root mat: Area of interwoven rootlets, usually from grasses and shrubs, found on the tuff or Bedacryl-coated surface, or an area with abundant rootlets.

Remnant stump: A stump left in situ in 1978/79 or 1995/96. The 1978-79 stumps were rotten and left only a void with bark, such as in G1-30 and 32 (see also 1995/96 Interventions: Root Treatment).

Penetration point: The point where a root penetrated the tuff surface.

Root impression: An imprint on the tuff surface resulting from the growth of a root along the surface of the tuff.

<u>Subterranean root</u>: A root or portion thereof that had penetrated below the tuff but was not removed (subterranean roots that were removed are defined as treatments: see <u>1995/96 Interventions: Root Treatment</u>).

Insect activity:

Non-specific: Areas of surface tuff marred by small ant holes, or insect trails (a combination of tuff fragments and particles from the overburden that were bonded together). This condition does not refer to fossil termite burrows, which were recorded as part of the microstratigraphical study by Craig Feibel. Found only on the northern sector of the trackway.

<u>Cut-worm pupal cases</u>: Small lunette-shaped craters (average 1cm diameter x 0.5cm deep) found on the tuff surface; some of the casings contained live larvae, commonly known as cut-worms (identified as Order: Coleoptera). The craters are natural casts formed around the pupal cases. Confined to the northern sector of the trackway.

#### 1995-1996 Interventions

#### Consolidation/stabilization:

A treatment applied to stabilize powdery and loose tuff by injecting an aqueous consolidant, Acrysol WS-24 (a methyl and ethyl methacrylate copolymer), into the disrupted area; dispersions ranged from 10% to 50% in water (v/v).

#### Fills:

A treatment to replace lost material or fill voids in the tuff that resulted from root removal or decay in order to prevent collapse of the void under the weight of reburial overburden. Composition of mixtures varied depending on localized conditions, but all were based on a mixture of Acrysol WS-24 and a filler such as sieved soil and tuff or fumed silica.

#### Reattachment:

Detached tuff was re-adhered with solutions of varying concentrations of Paraloid B-72 in organic solvent.

#### Root treatment:

- Surface roots or rootlets were always removed, but are not shown as a treatment on the graphics.
- Cut root or stump: exposed, cut, and sometimes routed, end of a root or stump that penetrated the tuff and was left *in situ* because it could not be removed without damage to the tuff.
- Subterranean root removed: subterranean root that was removed by hand with a scalpel and tweezers.

# Other 1995-1996 Interventions

Bedacryl removed: Bedacryl was removed from the surface of hominid prints G1-26 and G2/3-25 and hipparion prints B8 and C2 with acetone applied with brushes or in a cotton poultice.

<u>Insect trail removed</u>: Recent insect trails attached to the tuff surface were removed from the heel of G1-6 and from two areas in G1-13. This was done at the request of the palaeoscientists who felt the trails obscured the morphology of the prints and consequently their interpretation. They were removed with a scalpel and a dental pick, after which the area was consolidated with a 25% dispersion of Acrysol WS-24 in water.

Sample taken: Samples of Bedacryl and yellow staining taken for analysis.

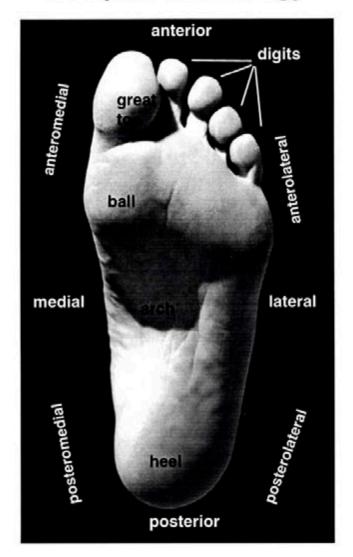
# Comparison with 1978-79 Cast/Photograph

Recorded in written form are observations made in the field on any changes noted between the print in situ and the 1978-79 cast (if available) and photographs. 1978-79 photographs were taken by L. Robbins, T. White, P. Jones, and J. Reader.

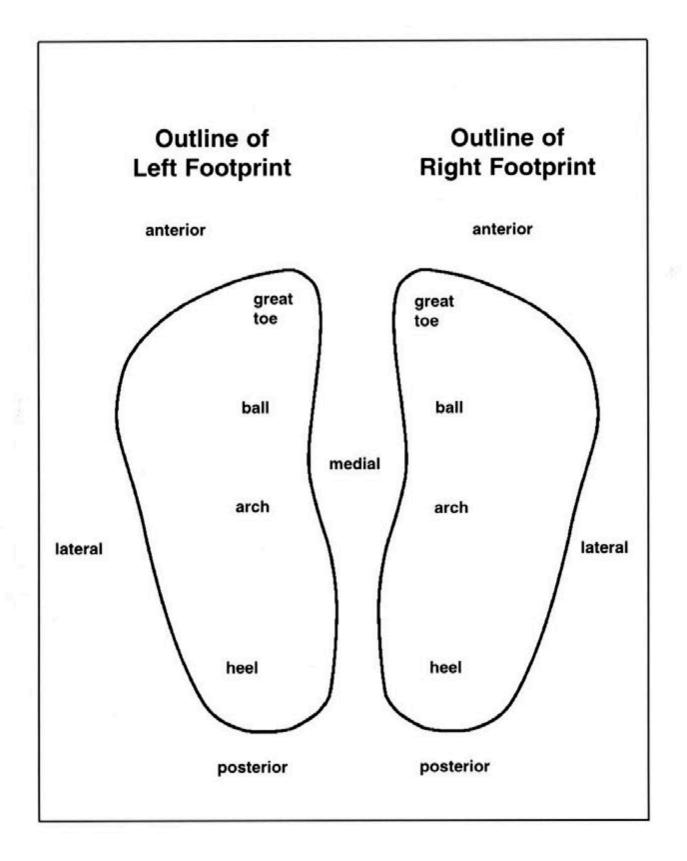
#### Notes

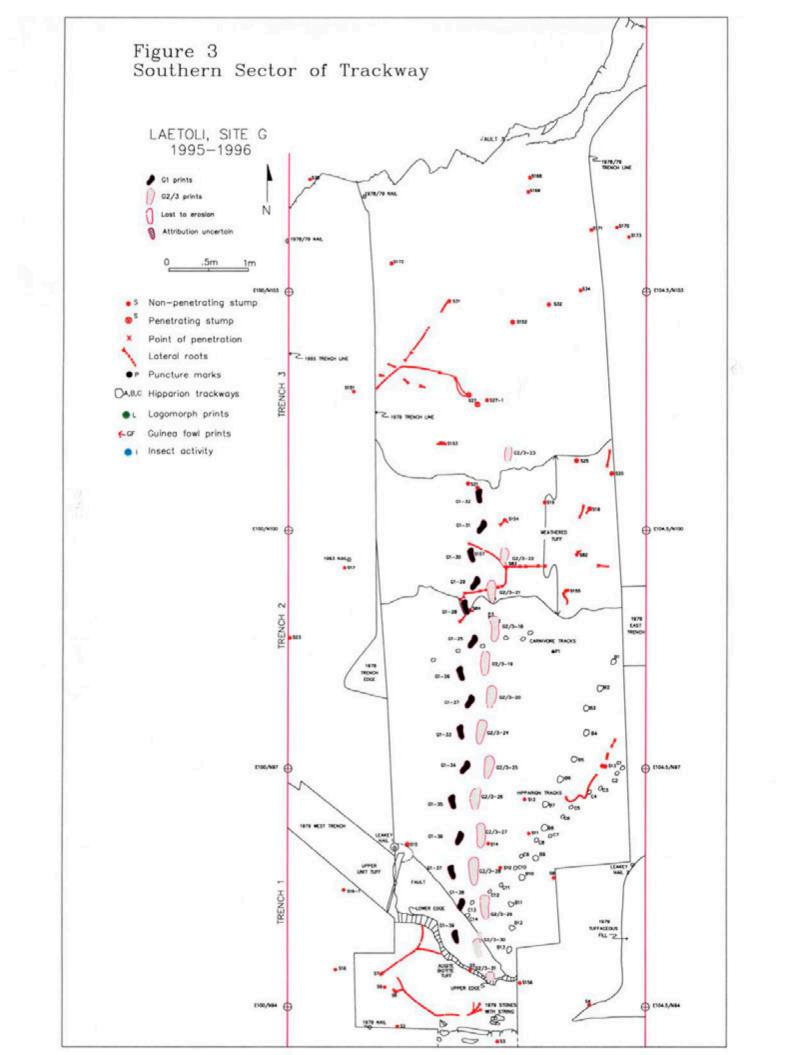
Other observations noted in the field, such as description of excavated fill material, or comments pertinent to the condition or documentation of the print.

# Footprint terminology



Left human footprint





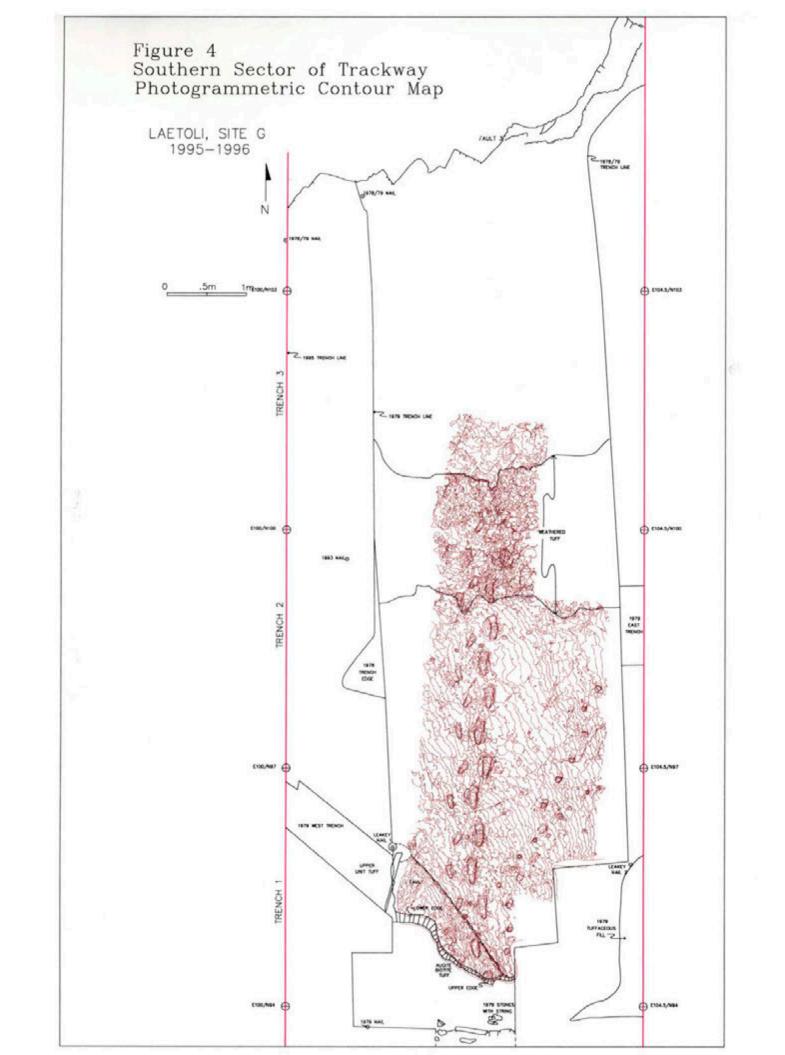


Figure 5 Middle Sector of Trackway

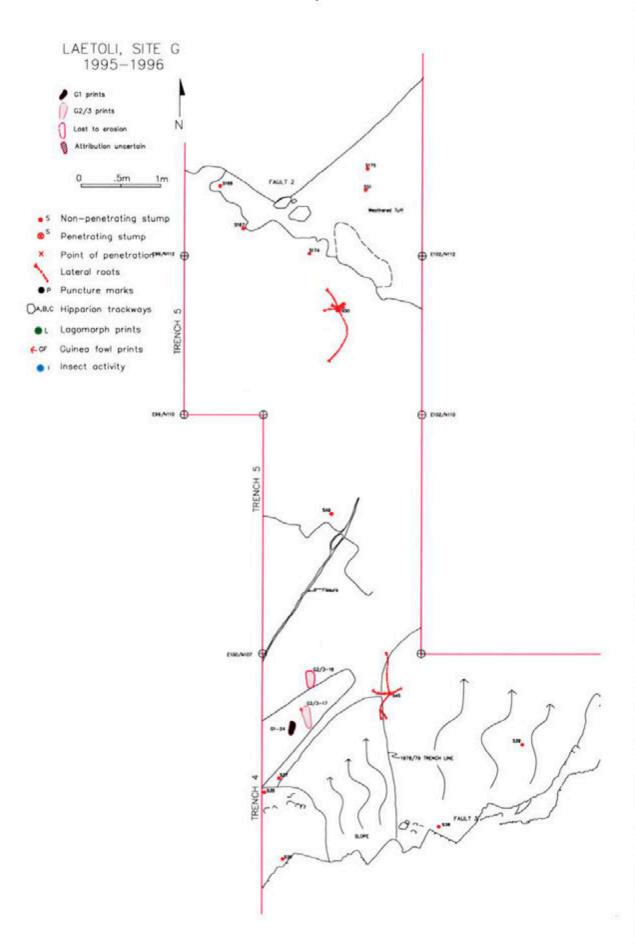


Figure 6 Middle Sector of Trackway Photogrammetric Contour Map LAETOLI, SITE G 1995-1996 TRENCH 5

Figure 7 Northern Sector of Trackway

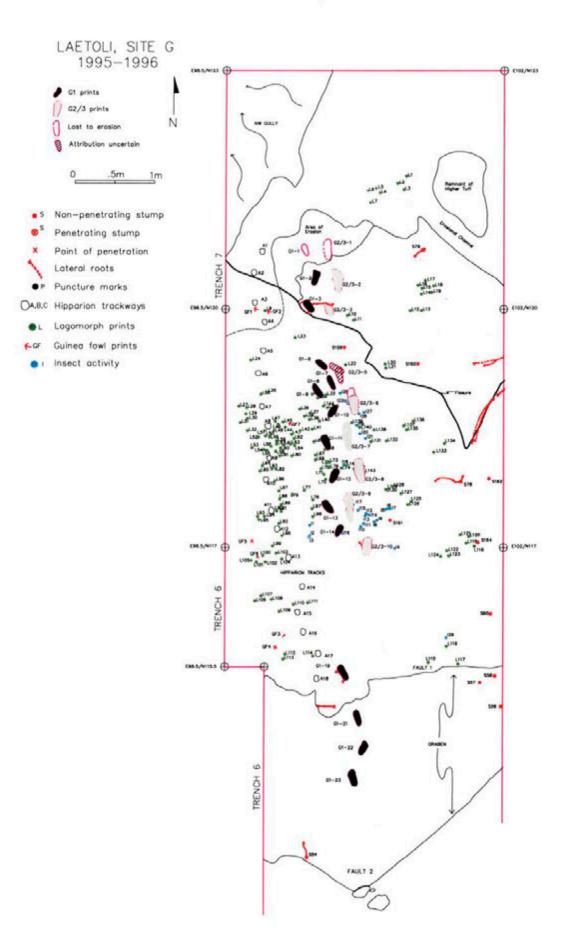
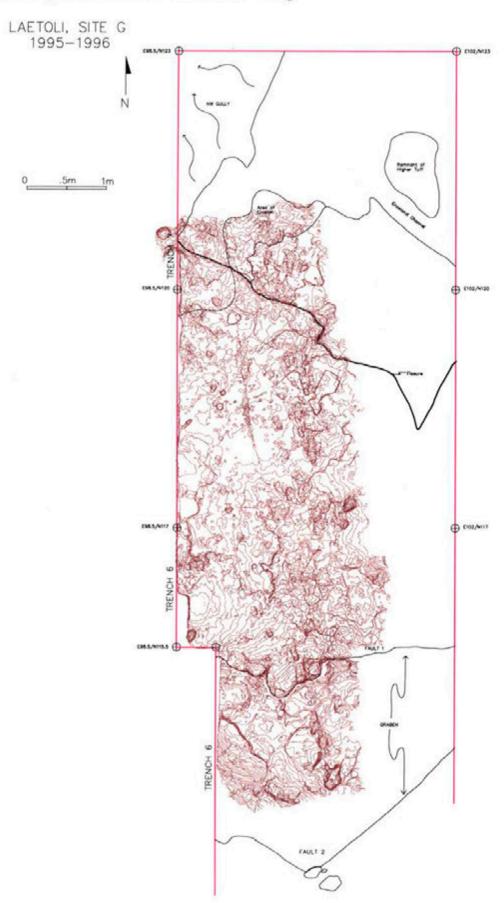


Figure 8 Northern Sector of Trackway Photogrammetric Contour Map



G1 Footprint List

PRINT	TRACKWAY SECTOR	GENERAL CONDITION OF PRINT	GRAPHIC CONDITION RECORD	PHOTO- GRAMMETRIC CONTOUR MAP	CAST
G1-1	North	Significant alteration	Flyover Polaroid	No	Yes
G1-2	North	Moderate alteration	Individual Polaroid	Yes	Yes
G1-3	North	Moderate alteration	Individual Polaroid	Yes	Yes
G1-4	North	Minor alteration	Flyover Polaroid	No	No
G1-5	North	Minor alteration	Flyover Polaroid	No	No
G1-6	North	Moderate alteration	Polaroid with G1-7, 8, and G2/3-5	Yes	No
G1-7	North	Moderate alteration	Polaroid with G1-6, 8, and G2/3-5	Yes	No
G1-8	North	Moderate alteration	Polaroid with G1-6, 7, and G2/3-5	Yes	No
G1-9	North	Moderate alteration	Individual Polaroid	Yes	No
G1-10	North	Moderate alteration	Individual Polaroid	Yes	No
G1-11	North	Moderate alteration	Individual Polaroid	Yes	No
G1-12	North	Minor alteration	Individual Polaroid	Yes	No
G1-13	North	Significant alteration	Individual Polaroid	Yes	No
G1-14	North	Moderate alteration	Individual Polaroid	Yes	No
G1-15	North	Moderate alteration	Flyover Polaroid	No	No
G1-16	North	Moderate alteration	Flyover Polaroid	No	No
G1-17	North	Moderate alteration	Flyover Polaroid	No	No
G1-18	North	Significant alteration	Flyover Polaroid	No	No
G1-19	North	Significant alteration	Individual Polaroid	Yes	Yes

PRINT	TRACKWAY SECTOR	GENERAL CONDITION OF PRINT	GRAPHIC CONDITION RECORD	PHOTO- GRAMMETRIC CONTOUR MAP	CAST
G1-20	North	Moderate alteration	Flyover Polaroid	No	No
G1-21	North	Moderate alteration	Individual Polaroid	Yes	No
G1-22	North	Moderate alteration	Individual Polaroid	Yes	Yes
G1-23	North	Significant alteration	Individual Polaroid	Yes	No
G1-24	Middle	Minor alteration	Individual Polaroid	Yes	Yes
G1-25	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-26	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-27	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-28	South	Significant alteration	Individual Polaroid	Yes	Yes
G1-29	South	Moderate alteration	Individual Polaroid	Yes	Yes
G1-30	South	Moderate alteration	Individual Polaroid	Yes	Yes
G1-31	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-32	South	Moderate alteration	Individual Polaroid	No	No
G1-33	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-34	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-35	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-36	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-37	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-38	South	Minor alteration	Individual Polaroid	Yes	Yes
G1-39	South	Minor alteration	Individual Polaroid	Yes	Yes

# **Laetoli Condition and Treatment Legend**

Approximate footprint outline: (layer 1) Black **Tuff conditions** Conditions related to 1978-79 interventions Weathering: (layer 2) Bedacryl conditions: (layer 8) Blue Bedacryl Cracking: (layer 3) Deteriorated or missing Bedacryl Red Green Losses: (layer 4) Embedding: (layer 9) × × Red Magenta Detached/ loose tuff: (layer 5) Silicone: (layer 10) Cyan Cyan Powdering: (layer 6) Excavation tool marks: (layer 11) Yellow Orange Other tuff conditions: (laver 7) Inventory number on tuff: (layer 12) 1-36 Black Void Other 1978-79 interventions: (layer 13) Disruption Orange Plastic fragment Yellow staining Yellow Root damage and insect activity 1995-96 Interventions Roots: (layer 14) Consolidation/stabilization: (layer 16) Surface roots Fills: (layer 17) Root mat Magenta Remnant stump Reattachment: (layer 18) Cvan Penetration point Green Root treatment: (layer 19) Cut root or stump Root impression Magenta Subterranean root removed Subterranean root Brown Yellow Insect activity: (layer 15) Other interventions: (layer 20) Non-specific insect activity Bedacryl removed Cut-worm pupal cases Insect trail removed Orange Sample taken Yellow

Condition Record G1-1: Left

# Location

Northern sector of trackway, trench 7.

#### Excavation and Reburial History

Partially exposed through natural weathering prior to 1978; excavated and reburied in 1978; exposed through erosion after 1979 and destroyed; eroded areas re-excavated and reburied in 1996.

# 1978-1979 Description

Heel print of the left foot. Well preserved, but the anterior part has been removed by erosion. This was the first print to be discovered by Dr Abell.

# 1996 Condition

General condition: Significant alteration: Print lost to erosion. No individual graphic condition record. Condition of tuff in area of G1-1 covered on Polaroid flyover XIV-2, 1996.

#### 1996 Interventions

Intervention in area of G1-1 covered in Polaroid flyover XIV-2, 1996.

# Comparison with 1978 Cast/Photograph

Comparisons with 1978 cast and photos revealed near complete loss of print G1-1 as a result of erosion. The only discernible remnant of original morphology was the rim of the heel.

#### Notes

See 1996-1998 Report on the Laetoli Project, pp. 26-27; 53-54 for contextual information on the loss of prints G1-1 and G2/3-1.

#### Location

Northern sector of trackway, trench 7

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996

# 1978-1979 Description

Complete, well preserved right footprint.

#### 1996 Conditions

General condition: Moderate alteration: Fair

#### Tuff conditions:

<u>Weathering</u>: Moderate weathering of tuff principally along the margins of print and an erosional channel that extends beyond the lateral and medial margins, and not so much within the interior of the print, which exhibited a well-calcified surface.

<u>Cracking</u>: Two significant cracks in interior of print (one crack runs down center of posterior half of print; a second crack runs perpendicular to the first, posterior to arch). Cracks also outside print and along medial margin.

Losses: Minute loss of tuff along crack in the area of insect activity, outside posteromedial margin of print.

Detached/loose tuff: Small detached fragment of tuff just outside medial margin of arch area.

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding of fine particles in the weathered areas; very little embedding on the well-calcified floor of print.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

<u>Root damage</u>: Fine rootlets present in the area of the digits and heel left subtle impressions on tuff surface when removed (not recorded on graphic).

# Insect activity:

Non-specific: Burrow-like formation outside of medial side of heel.

#### 1996 Interventions

#### Consolidation/stabilization: none

Fills: none

Reattachment: Small detached fragment of tuff reattached outside medial margin of arch area.

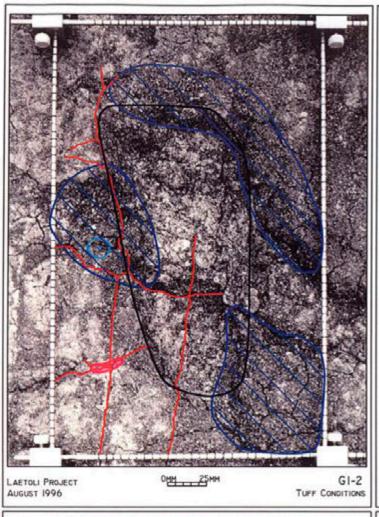
Root treatment: Surface roots removed.

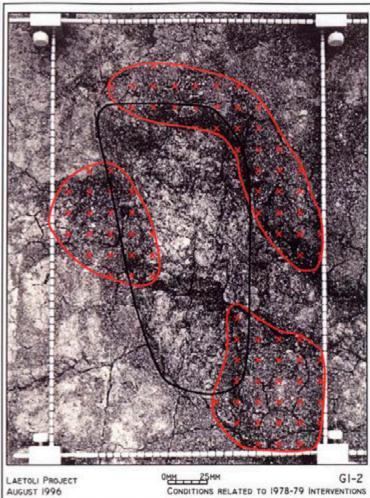
Other: none

# Comparison with 1978-79 Cast/Photograph

Comparison with 1978 cast and photos showed only slight loss of resolution of features; loss of calcite vein in crack along medial margin of print; slight widening of pre-existing cracks (including cracks inside print); additional cracking and weathering of tuff surface around margins of print; and embedding of fill around rim. Recent insect burrows outside print were not visible in the 1978 cast and photos.

Notes
On excavation in 1996, the 1978 reburial fill was extremely hard and compact. Calcified surface yellowish-cream in color, which may suggest application of a consolidant in 1978; however this was not so obvious as to warrant describing it as yellow staining, nor were any signs of Bedacryl stringers found. Within its margins, the print showed only minor alteration; however, the surrounding tuff exhibited moderate alteration as a result of more extensive weathering of the tuff since 1978.



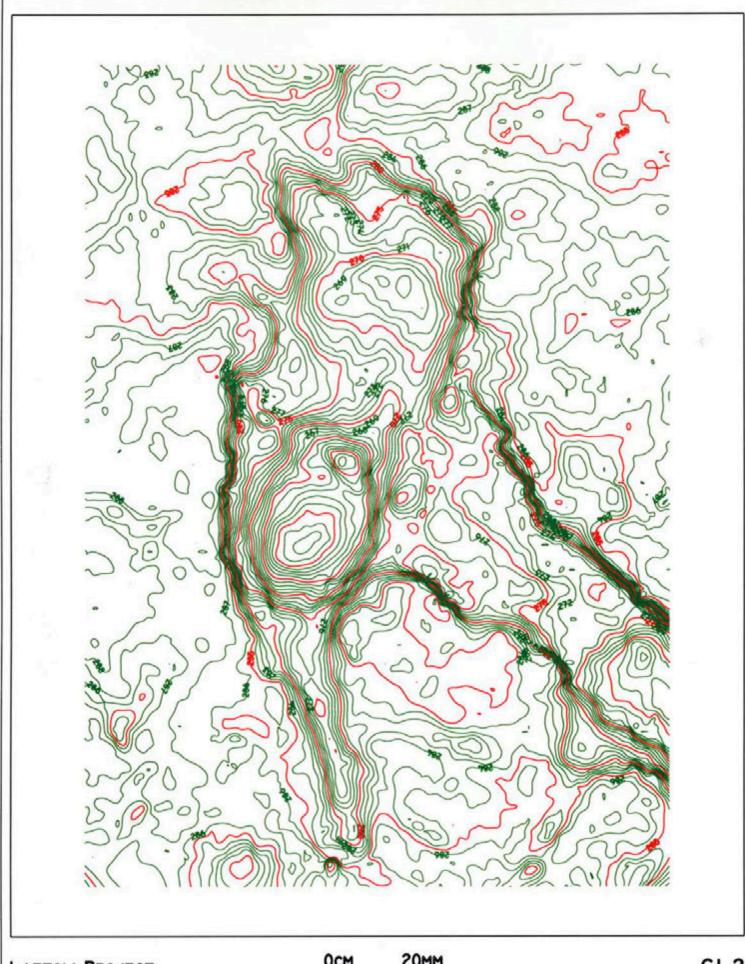




0MM 25MM

1995-96 INTERVENTIONS

LAETOLI PROJECT AUGUST 1996



LAETOLI PROJECT AUGUST 1996

20MM 0cm

GI-2 CONTOUR MAP

#### Location

Northern sector of trackway, trench 7

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996

# 1978-1979 Description

Left footprint, weathered but clearly visible

#### 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Extensive weathering throughout interior of print and surrounding area.

Cracking: Crack with calcite vein traverses the posterior portion; traces of calcite remain.

Losses: Minor loss of tuff in heel area, which may have occurred during root removal

Detached/loose tuff: Minor areas of loose tuff in posterior half of print adjacent to large root.

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found on anterior half of the print, identified by stringers between cracks.

Embedding: Extensive embedding of fine particles in weathered areas.

Silicone: Minor traces of silicone outside medial margin of print.

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Large root, 1cm diameter, penetrated the tuff outside the lateral heel margin, and exited within the print at the heel. It progressed across the arch along the surface and then re-entered the tuff outside the medial margin of the print. Smaller root, less than 0.5cm diameter, penetrated the tuff in the anterior portion. Minor surface roots along the print margin. Surface roots left impressions in tuff after removal.

#### Insect activity:

Non-specific: Minor traces, possibly of an ant hole, outside of lateral print margin; remnant of insect burrows within print and outside medial margin of heel.

# 1996 Interventions

<u>Consolidation/stabilization:</u> Stabilization treatments applied to loose areas of tuff where large root penetrated and was cut for removal.

Fills: none

Reattachment: none

Root treatment: All surface roots removed. Subterranean roots left in situ.

Other: none

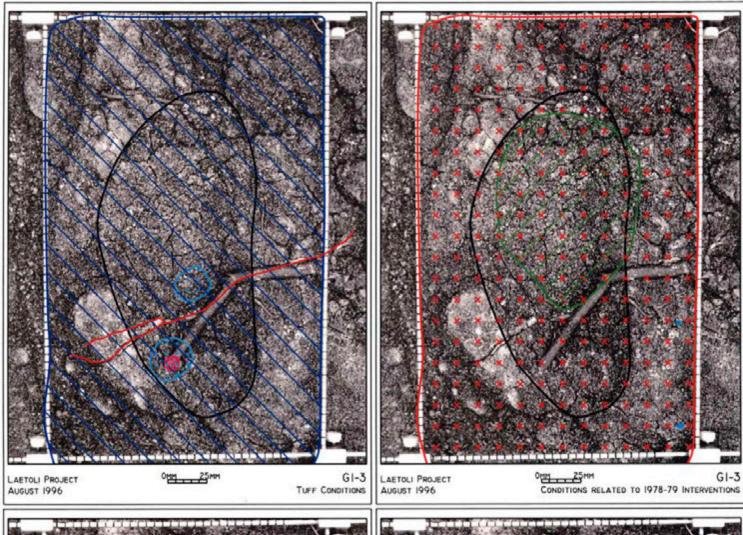
#### Comparison with 1978-79 Cast/Photograph

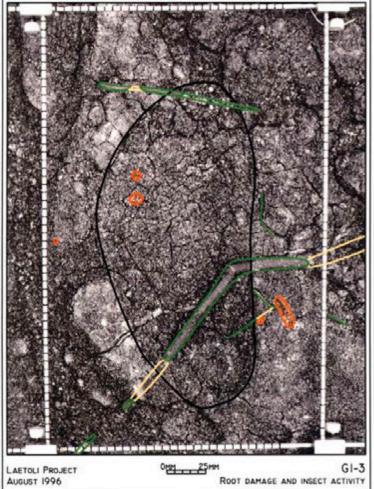
Comparison with 1978 cast and photos showed loss of resolution of features and print margin due to weathering of tuff surface; increase in weathering of tuff; loss of some calcite in crack; and imprinting of tuff from surface roots.

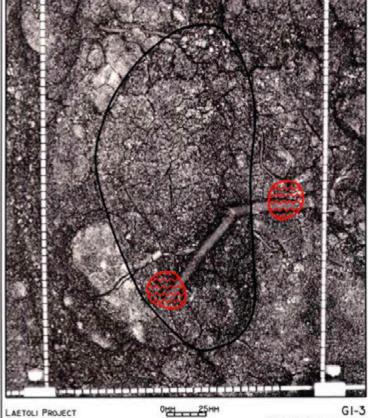
#### Note

On excavation in 1996, the 1978 reburial fill was very hard and compact.

Video footage (by Pedro Celedon) of root removal from G1-3.

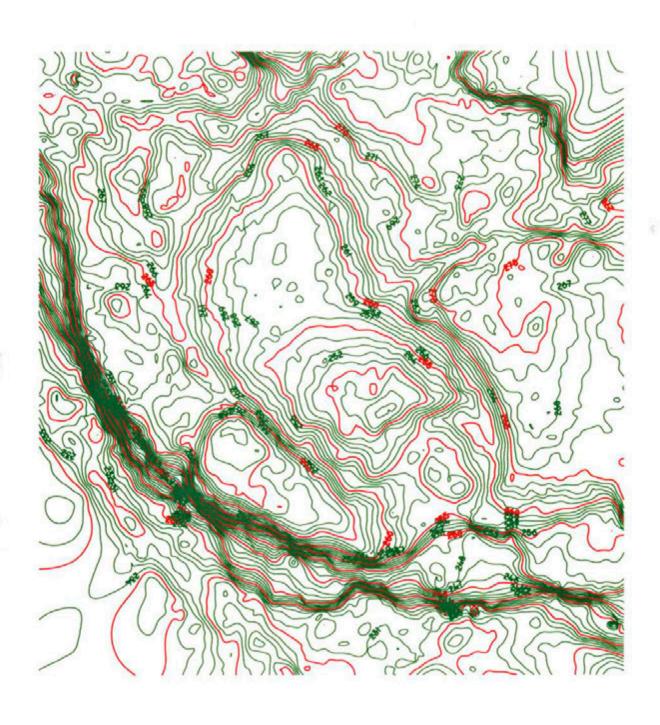






1995-96 INTERVENTIONS

LAETOLI PROJECT AUGUST 1996



LAETOLI PROJECT AUGUST 1996 0cm 20mm

GI-3 CONTOUR MAP

# Location

Northern sector of trackway, trench 7.

# Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

Depression in lower part of tuff, position in trail indicates right footprint.

# 1996 Condition

General condition: Moderate alteration: Fair. Based on condition of the tuff in general area since no print is visible. No individual graphic condition record. Condition of tuff in area of G1-4 is recorded on Polaroid flyover XIII-2, 1996.

# 1996 Interventions

Interventions in area of G1-4 recorded on Polaroid flyover XIII-2, 1996.

# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with photos showed increase in weathering of tuff in the area of the print and embedding of particles.

# Notes

On excavation in 1996, the 1978 reburial fill in this area was very compacted and contained pebbles up to 2cm diam.

# Location

Northern sector of trackway, trench 7.

# Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

Amorphous depression, allocated a number in the field, but probably a natural feature.

# 1996 Condition

General condition: Minor alteration: Good. Based on condition of tuff in general area since no print is visible. No individual graphic condition record. Condition of tuff in area of G1-5 recorded on Polaroid flyover XIII-2, 1996.

# 1996 Interventions

Interventions in area of G1-5 recorded on Polaroid flyover XIII-2, 1996.

Comparison with 1978 Cast/Photograph
No cast. Comparison with 1978 photos showed loss of calcite in vein in posterior portion of area defined as print G1-5 in 1978 and slight increase in weathering of tuff.

On excavation in 1996, the 1978 reburial fill in the area was very compacted.

# Condition Record

#### Location

Northern sector of trackway, trench 7

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996

#### 1978-1979 Description

Poorly preserved heel print, weathered, indeterminate.

### 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Extensive weathering within print margin and extending beyond anterior portion.

Cracking: Cracks criss-cross print, extending beyond margins of print.

Losses: none

Detached/loose tuff: Loose tuff inside print margin and outside west margin.

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding of fine particles in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: Yellow staining on tuff surface outside margins of print

Root damage: Surface roots adhered to tuff outside anterior margin of print.

#### Insect activity:

Non-specific: Extensive insect tunneling outside anterior portion of print.

#### 1996 Interventions

Consolidation/stabilization: Loose areas of tuff stabilized with WS-24 @ 25%.

Fills: none

Reattachment: none Root treatment: none

Other: Insect tunnel outside anterior portion of print removed.

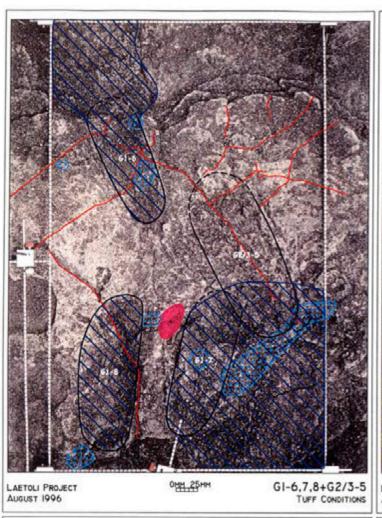
#### Comparison with 1978-79 Cast/Photograph

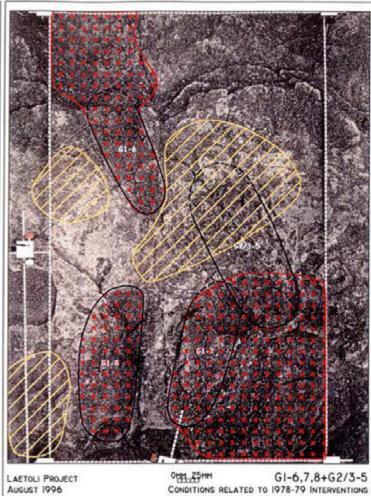
No cast. Comparison with 1978 photo showed increased weathering, extension and widening of preexisting cracks, and extensive insect tunneling since 1978.

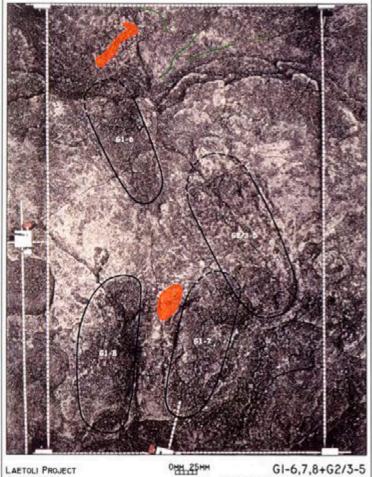
#### Notes

Graphic condition record includes prints G1-6, 7, 8 & G2/3-5 and is printed at a different scale than the other Polaroids with single prints. See other written condition records for description of conditions in and around those prints.

Print G1-6 is not shown on the plan of the trackway published in Michael Day, Guide to Fossil Man. 1986, 184, Fig. 63 (see 1996-1998 Report on the Laetoli Project, p. 13).





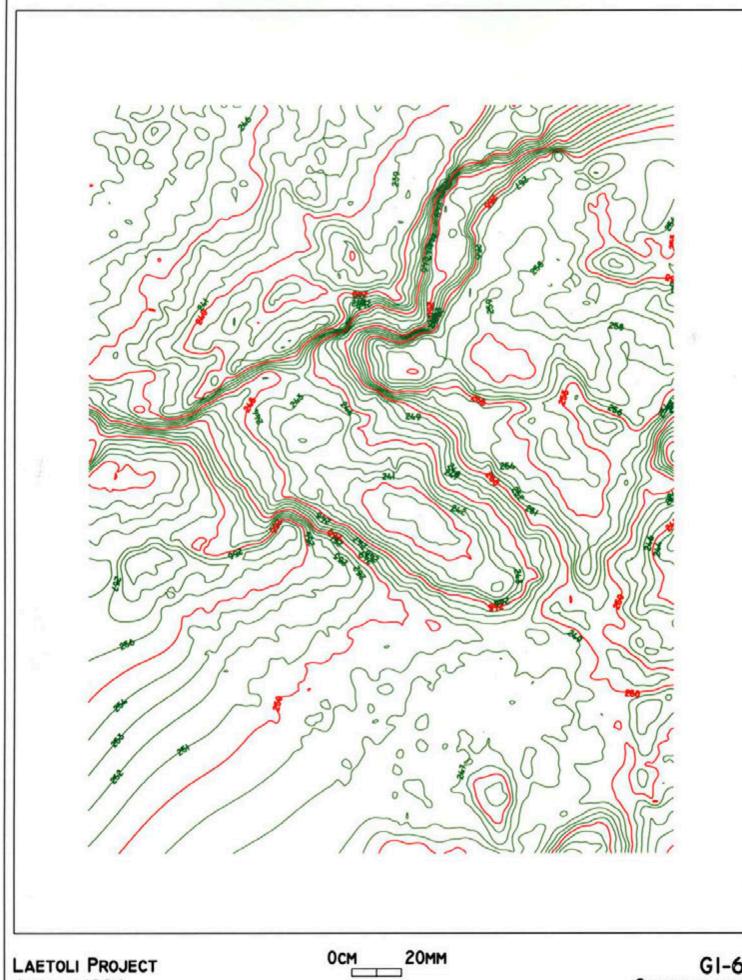


AUGUST 1996

0нн 25мн LAETOLI PROJECT AUGUST 1996

0мн 25мм GI-6,7,8+G2/3-5 ROOT DAMAGE AND INSECT ACTIVITY

G1-6,7,8+G2/3-5 1995-96 INTERVENTIONS



LAETOLI PROJECT AUGUST 1996

GI-6 CONTOUR MAP

# Location

Northern sector of trackway, trench 7

#### Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

G1-7 to 11. Depressions in the lower part of the tuff, G1-9 left, G1-10 right, G1-11 left.

# 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Moderate weathering of tuff in and around print.

Cracking: none

Losses: Abraded tuff surface, associated with 3mm deep hole, noted outside west margin of print. Cause of phenomenon was not ascertained, but may be result of insect activity or from loss of tuff fragment since 1978 photos.

Detached/loose tuff: Small area of loose tuff near center of print, and near east margin extending beyond the margin of G1-7 to G2/3-5.

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding of fine particles in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: none

#### Insect activity:

Non-specific: Possible insect activity; see <u>Tuff conditions: Losses</u>.

#### 1996 Interventions

Consolidation/stabilization: Loose areas of tuff inside and outside margins of print stabilized with WS-24 @ 25%.

Fills: none

Reattachment: none Root treatment: none

Other: none

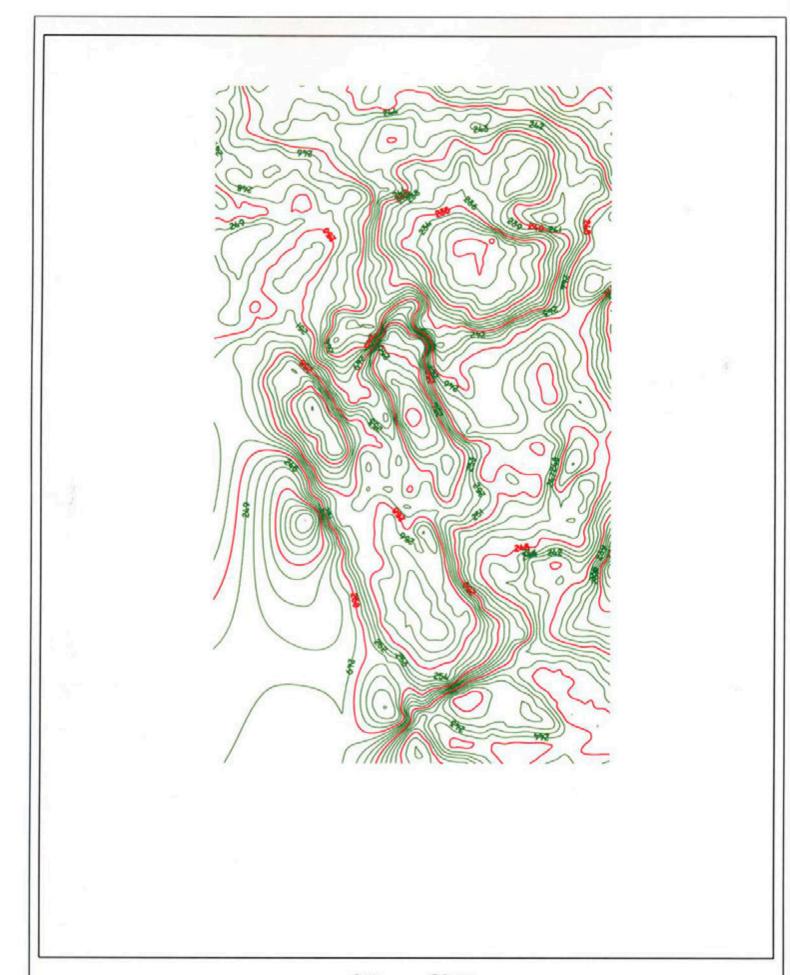
#### Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed slight loss of resolution of features and an increase in weathering of the tuff.

# Notes

Graphic condition record includes prints G1-6, 7, 8 & G2/3-5 (see graphic record under G1-6), and is printed at a different scale than the other Polaroids with single prints. See other condition records for description of conditions in or around those prints.

Print G1-7 is identified as G2/3-5 on the plan of the trackway published in Michael Day, Guide to Fossil Man, 1986, 184, Fig. 63 (see 1996-1998 Report on the Laetoli Project, p. 13).



0cm\_\_\_\_20mm

GI-7 CONTOUR MAP

Northern sector of trackway, trench 7

#### Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-7 to 11. Depressions in the lower part of the tuff, G1-9 left, G1-10 right, G1-11 left.

## 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Moderate weathering in all areas within print margins.

Cracking: Crack traverses print.

Losses: see G1-7 for loss of tuff between G1-7 and 8.

Detached/loose tuff: Dislodged and loose tuff outside anterior east margin and posterior margin.

Powdering: none
Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding in weathered areas, especially posterior area.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: Yellow staining of tuff outside west margin

Root damage: none

<u>Insect activity</u>: see G1-7 for possible insect activity on tuff between G1-7 and 8.

#### 1996 Interventions

Consolidation/stabilization: Minor stabilization of loose tuff outside margins of print with WS-24 @ 25%

Fills: none

Reattachment: none Root treatment: none

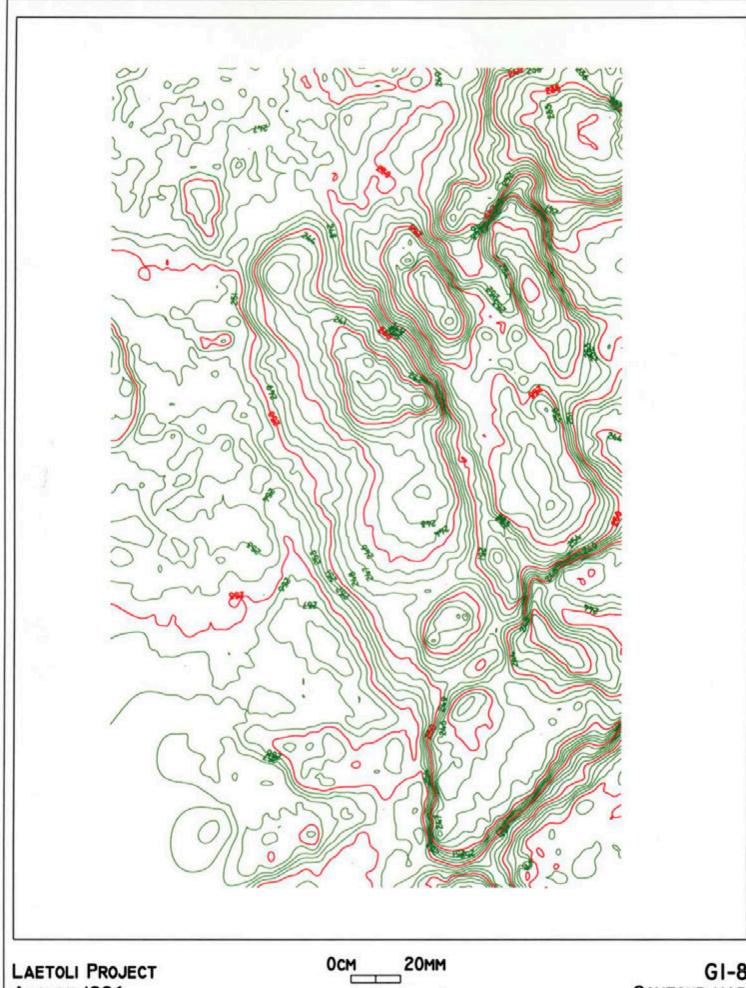
Other: none

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed slight loss of resolution and additional weathering of tuff.

#### Notes

Graphic condition record includes prints G1-6, 7, 8 & G2/3-5 (see graphic record under G1-6) and is printed at a different scale than the other Polaroids with single prints. See other condition records for description of conditions in and around those prints.



20MM

GI-8 CONTOUR MAP

Northern sector of trackway, trench 7

## Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-7 to 11. Depressions in the lower part of the tuff, G1-9 left, G1-10 right, G1-11 left.

## 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Weathering of tuff in heel portion. Anterior portion of tuff was well-calcified.

Cracking: Cracks in tuff outside margins of print only.

Losses: Surface abrasion of tuff on posteromedial margin of heel.

Detached/loose tuff: Tuff associated with weathered area in posterior portion of print was loose; one small fragment in center of heel portion was detached.

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none (see Other: yellow staining)

Embedding: Minor embedding in weathered tuff.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: Faint yellow staining on surface of hominid print and on lagomorph print lateral to the

heel.

Root damage: Rootlets adhered to surface in and around print.

Insect activity: none

#### 1996 Treatments

Consolidation/stabilization: none

Fills: none

Reattachment: Reattachment of dislodged tuff fragment in the heel.

Root treatment: Surface roots removed leaving slight impressions in tuff.

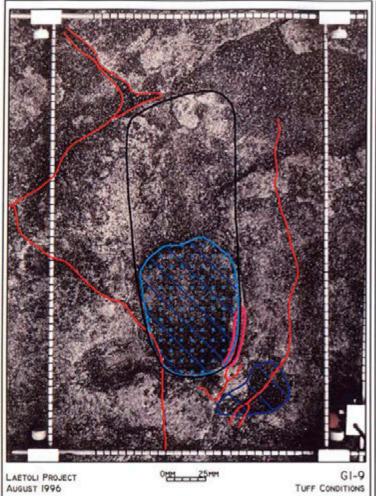
Other: none

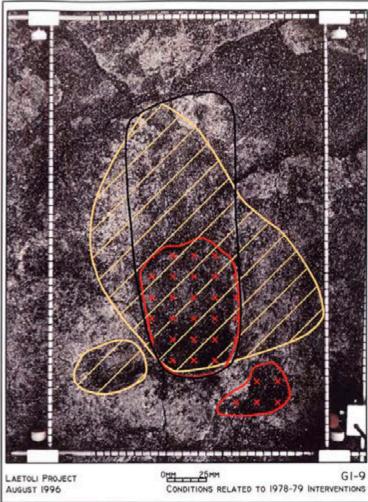
## Comparison with 1978-79 Cast/Photograph

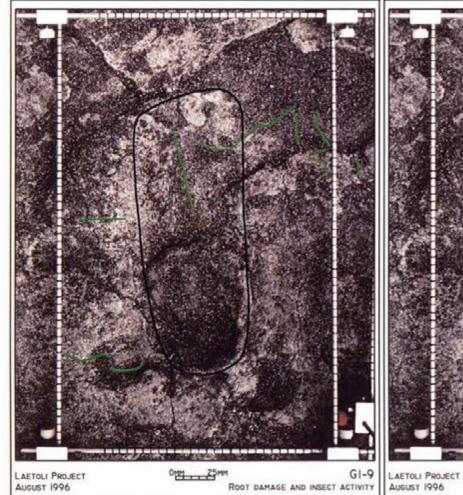
No cast. Comparison with 1978 photos showed slight loss of resolution of details, an increase in weathering in heel portion, and embedding of particles in tuff.

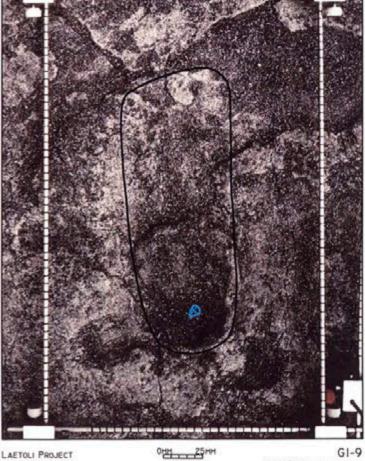
#### Notes

Three lagomorph prints outside posterior and lateral margins.

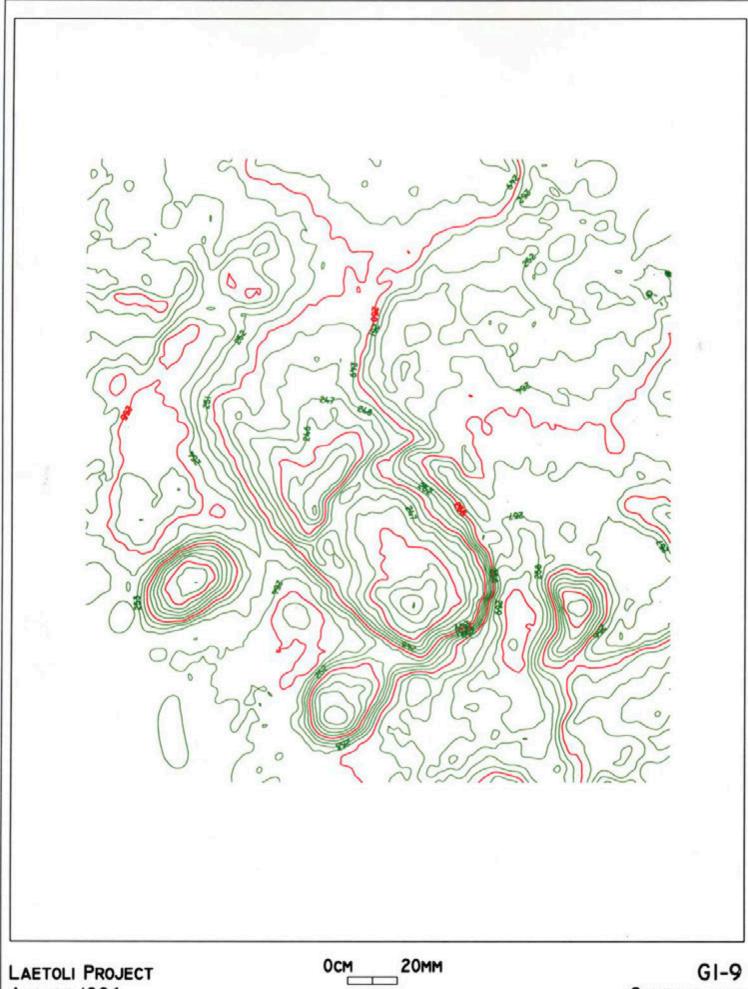








1995-96 INTERVENTIONS



AUGUST 1996

GI-9 CONTOUR MAP

Northern sector of trackway, trench 7

## **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-7 to 11. Depressions in the lower part of the tuff, G1-9 left, G1-10 right, G1-11 left.

#### 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Moderate weathering of tuff in posterior portion of the print and slightly weathered in anterior region. Tuff of mid portion of print is well consolidated and showed no weathering. <a href="Cracking">Cracking</a>: Several cracks traverse the print at the anterior and posterior portion; large crack with partially preserved calcite vein runs parallel to print outside lateral margin.

Losses: none

Detached/loose tuff: Loose tuff just outside posteromedial print margin.

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none (see Other: yellow staining)

Embedding: Embedding of fine particles in weathered areas.

Silicone: Traces of silicone in and around print.

Excavation tool marks: none Inventory number on tuff: none

Other: Yellow staining on tuff outside anterior margin of print.

## Root damage: none

#### Insect activity:

Non-specific: Two insect trails outside anterior margin and one insect hole (possibly an ant hole) outside posterolateral margin.

## 1996 Interventions

Consolidation/stabilization: Loose area of tuff stabilized with WS-24.

Fills: none

Reattachment: none Root treatment: none

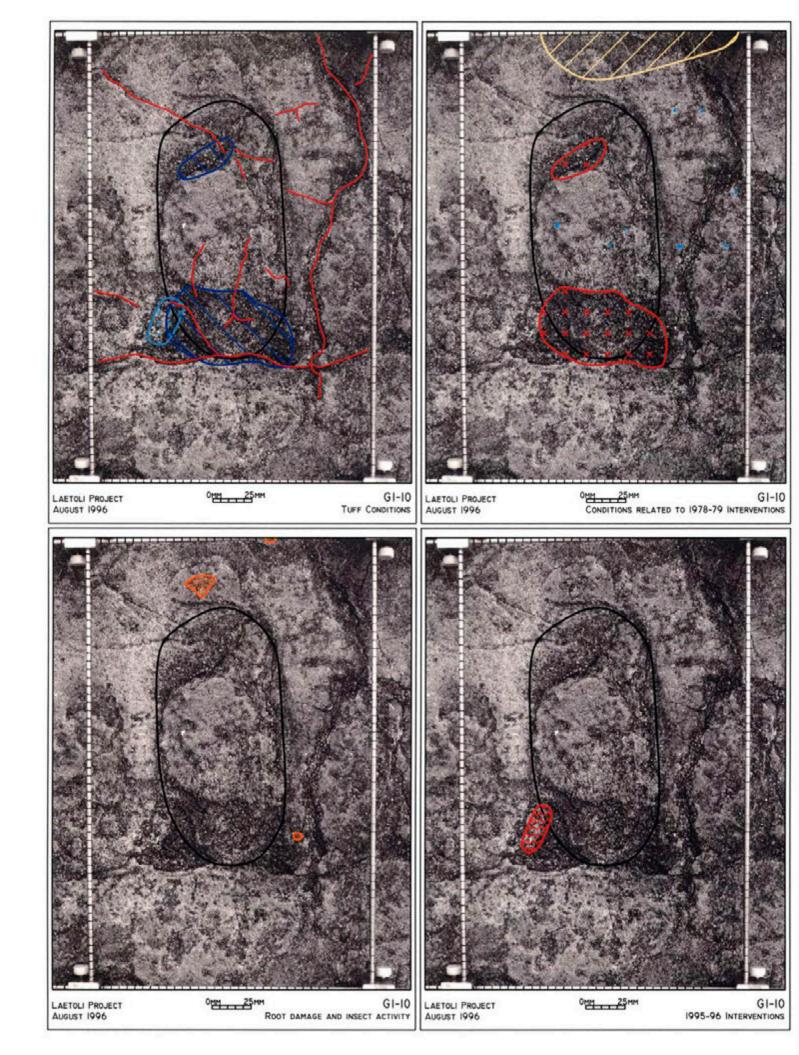
Other: none

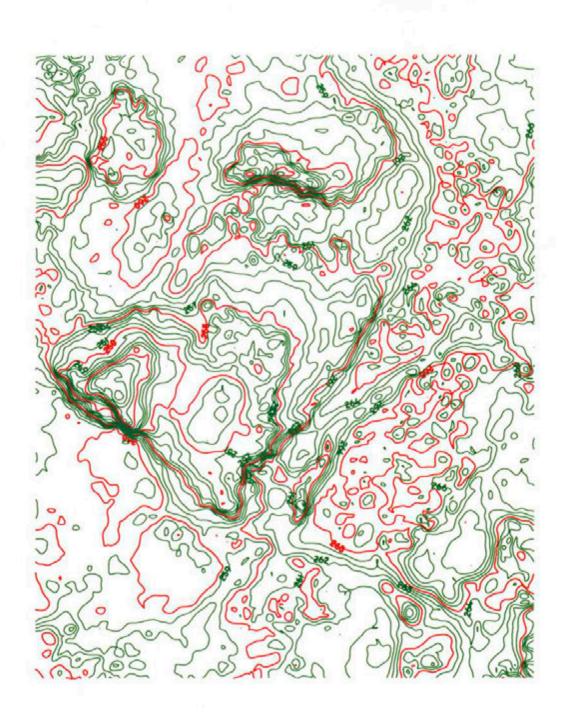
## Comparison with 1978-79 Cast/Photograph

No cast (despite traces of silicone in and around print). Comparison with 1978 photos showed only slight loss of resolution of surface details; increased weathering of heel portion; and embedding of particles in weathered areas.

#### Notes

On excavation, the 1978 fill was compacted and adhered to tuff.





0cm 20mm

GI-IO CONTOUR MAP

Northern sector of trackway, trench 7

## **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996

## 1978-1979 Description

G1-7 to 11. Depressions in the lower part of the tuff, G1-9 left, G1-10 right, G1-11 left.

## 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Moderate weathering of tuff along central axis of the print.

<u>Cracking</u>: Crack (up to 1mm wide) with partially preserved calcite vein traverses print and continues beyond margins.

Losses: none

Detached/loose tuff: Loose tuff in the heel portion.

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding of fine particles in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Numerous rootlets (0.5mm to 1mm) adhered to surface in anterior portion of the print and posterior to heel, leaving impressions in tuff and penetrating the tuff in seven recorded locations.

Insect activity:

Non-specific: Two traces of insect trails: one in anterior portion and one on medial heel margin; characterized by grainy uplifted tuff.

Cut-worm pupal cases: A pupal case found in excavated fill of the print, but not as a cast in the tuff.

#### 1996 Interventions

Consolidation/stabilization: Loose tuff in heel area stabilized; minor consolidation where roots removed in anterior portion, with WS-24 @ 25%

Fills: none

Reattachment: Two small fragments reattached in the posterior portion

Root treatment: Surface roots were removed, but in some cases bark of rootlets adhered to tuff and could not be removed without taking up some of the underlying tuff; subterranean root left in situ.

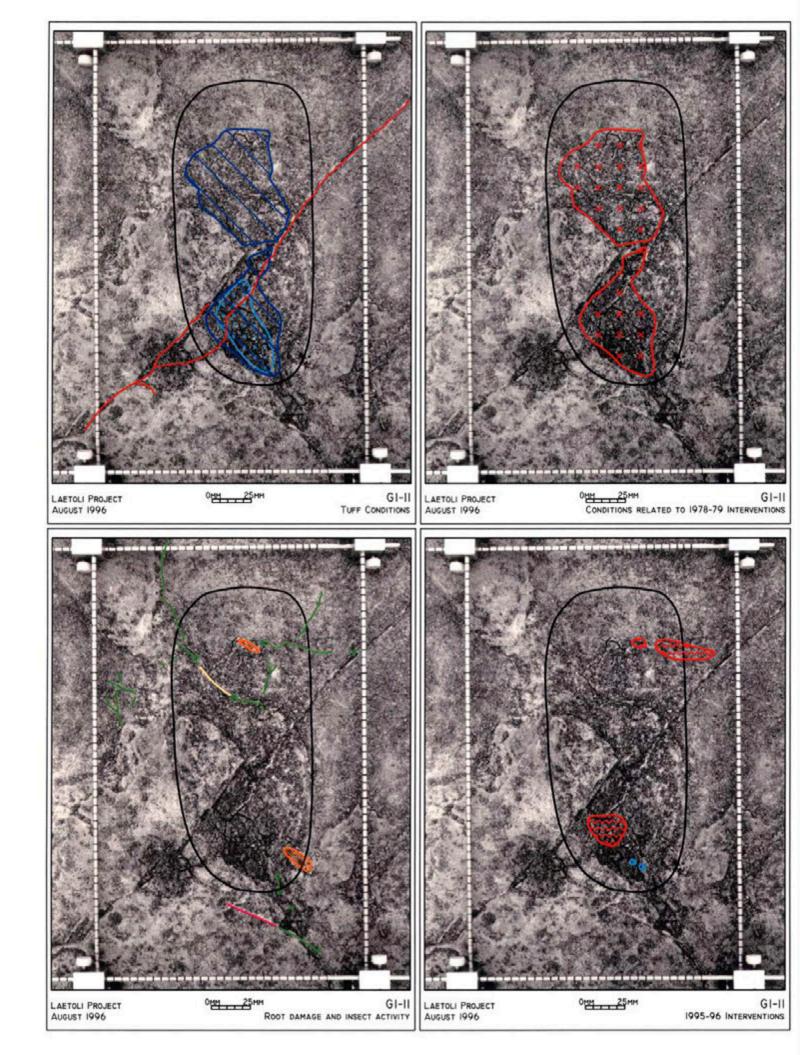
Other: none

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed slight loss of resolution of surface details; minor loss of calcite in vein; new weathering of tuff in print; embedding of particles in weathered areas; and insect activity since 1978.

Notes
On excavation in 1996, the 1978 reburial fill was compacted and contained pebbles 0.2-0.4 cm in diam.

Lagomorph print lateral to heel.



Northern sector of trackway, trench 7

## Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

Eroded right footprint retaining some morphology of the sole of the foot.

#### 1996 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: Moderate weathering of tuff in heel portion; and in lagomorph print outside medial margin.

<u>Cracking</u>: Crack with calcite vein (fragments of calcite missing) runs parallel to axis of print outside lateral margin; a second large crack runs perpendicular to the first outside posterior margin.

Losses: none

Detached/loose tuff: none

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Severe embedding of fine particles in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: A few surface rootlets in heel portion and beyond print margin (not shown in graphic).

Insect activity: none

## 1996 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

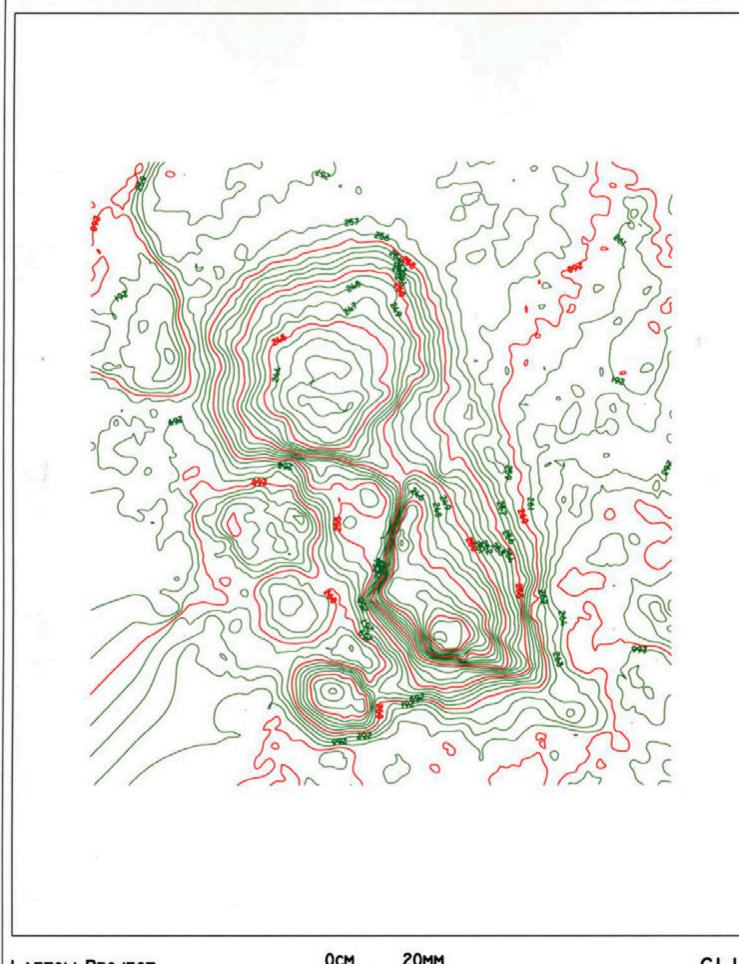
Other: none

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed slight loss of resolution where tuff was weathered; an increase in weathering in the heel; and embedding of particles in weathered tuff. Loss of calcite in crack outside print was also visible in 1978 photos. Some 1978 photos show fragments of tuff in center of anterior portion of print that is missing from later 1978 photos and was not seen *in situ* in 1996.

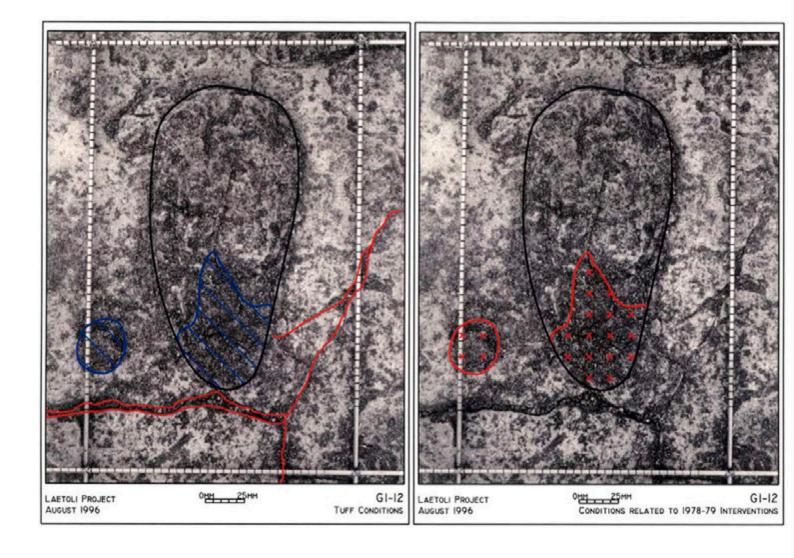
#### Notes

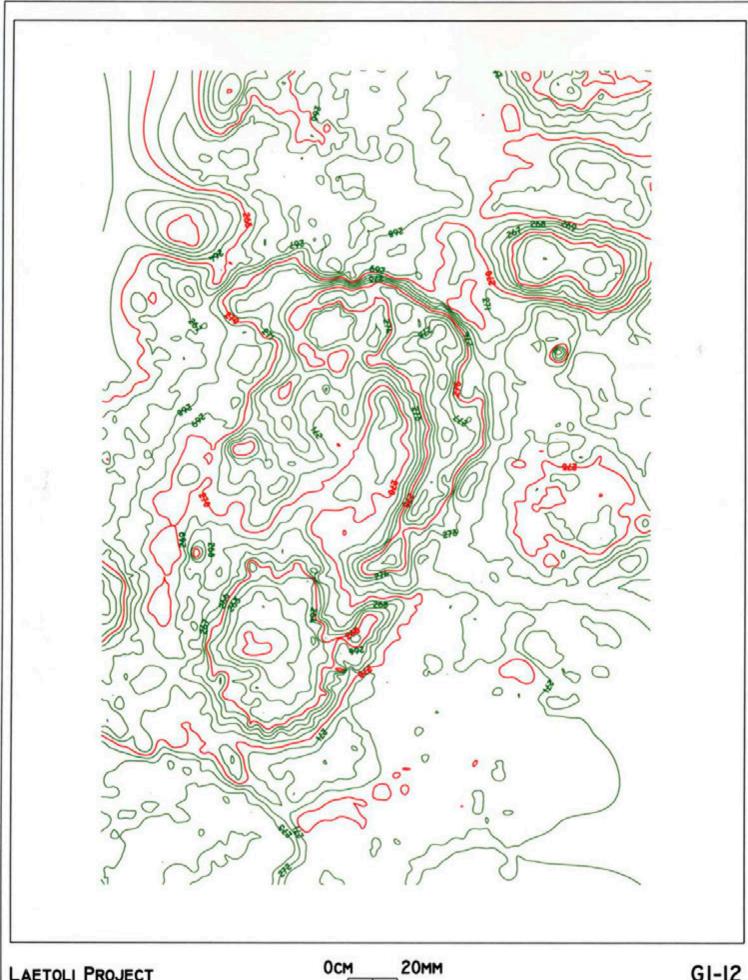
Five possible lagomorph prints were noted outside margins of print.



20MM 0CM

GI-II CONTOUR MAP





GI-12 CONTOUR MAP

Northern sector of trackway, trench 7

#### Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-13 to 18. Depressions in the lower part of the tuff. Recognizable as footprints but not sufficiently well preserved to be measured, and retaining no morphology. G1-13 left, G1-14 right, G1-15 left, G1-16 to G1-18 indeterminate.

## 1995 Condition

General Condition: Significant alteration: Poor

#### Tuff conditions:

Weathering: Moderate to severe weathering of tuff in interior portion of print and outside the posterior margin.

Cracking: Crack with partially preserved calcite vein traverses the anterior portion of the print.

Losses: Surface loss of tuff in areas where insect trails removed near center of print.

Detached/loose tuff: Two small areas of loose tuff in anterior portion, and one outside anterior margin.

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Extensive embedding of fine particles in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Rootlets (~2mm diam.) penetrated tuff on lateral side of print and in area of great toe. Roots left slight impressions on surface after removal.

#### Insect activity:

Non-specific: Five discrete areas of insect trails in anterior half of print; trails were a solid mass of well-cemented tuff particles, strongly adhered to tuff.

#### 1995 Interventions

Consolidation/stabilization: Tuff stabilized where insect trails removed with WS-24 @ 33% (graphic symbol overlain by symbol for insect removal and thus not visible on graphic). Minor stabilization in areas of loose tuff with WS-24 @ 25%.

Fills: none

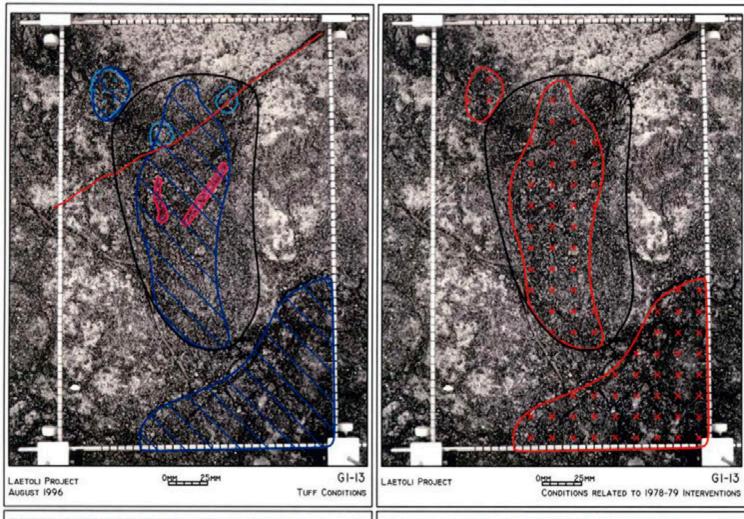
Reattachment: Dislodged tuff, in area of great toe and on anterior margin, was reattached.

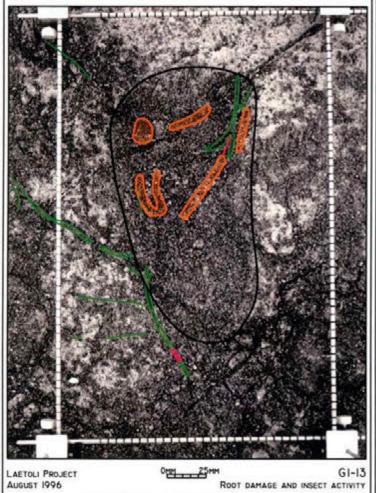
Root treatment: Surface roots removed with scalpel.

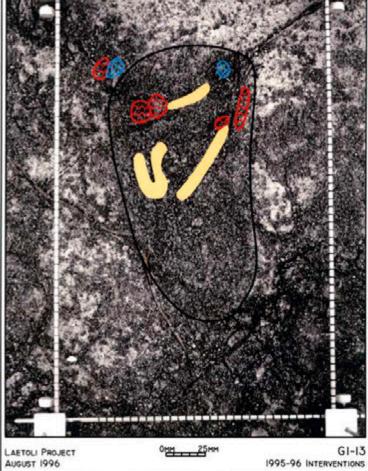
Other: Three full and part of a fourth insect trail removed with sharpened applicator stick and scalpel.

## Comparison with 1978-79 Cast/Photograph

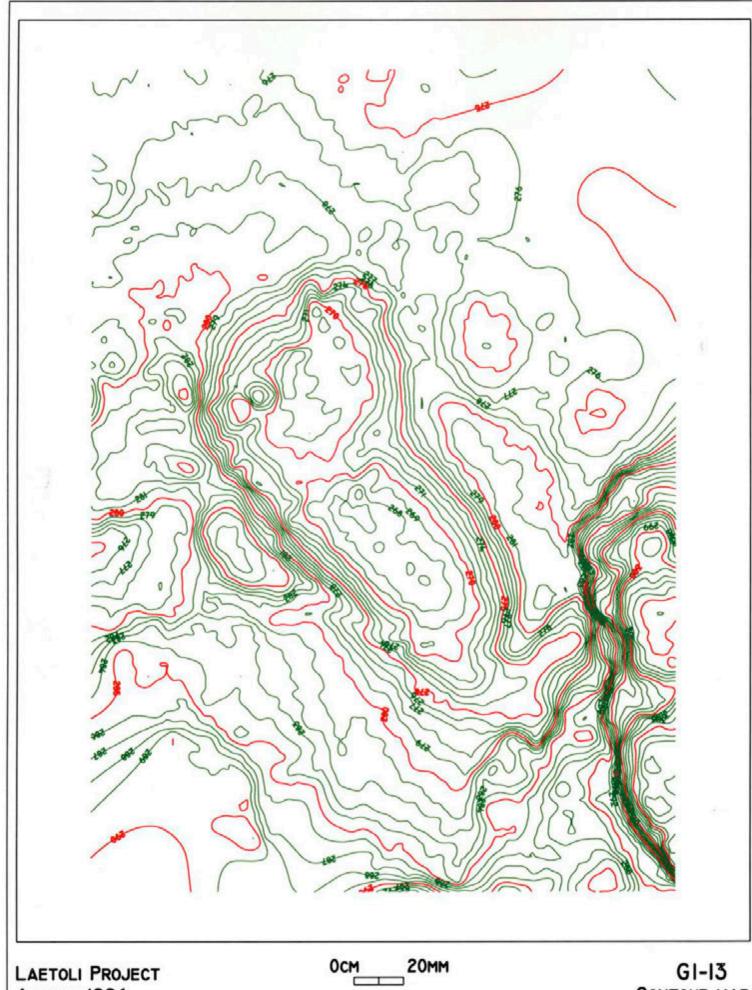
No cast. Comparison with 1978 photos showed loss of resolution of features; slight deformation and loss of surface of tuff due to insect activity; significant increase in weathering of tuff, particularly the patch of higher tuff in interior arch portion; embedding of particles in weathered areas; and slight loss of calcite in crack near lateral margin.







1995-96 INTERVENTIONS



AUGUST 1996

CONTOUR MAP

Northern sector of trackway, trench 7

#### Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-13 to 18. Depressions in the lower part of the tuff. Recognizable as footprints but not sufficiently well preserved to be measured, and retaining no morphology. G1-13 left, G1-14 right, G1-15 left, G1-16 to G1-18 indeterminate.

## 1995 Condition

General condition: Moderate alteration: Fair

## Tuff conditions:

Weathering: Generalized weathering of tuff in this area. More severe weathered patches of tuff noted outside lateral margin, within anterior portion of print, and on exterior of print on medial side.

<u>Cracking</u>: Crack traversed the heel (max. 3mm wide). <u>Losses</u>: Minor loss of tuff outside posterolateral margin.

Detached/loose tuff: none

Powdering: Slight powdering of ridge of tuff outside posterior margin of print

Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none (see Other: yellow staining)

Embedding: Severe embedding of fine particles in the anterior portion of the print, and more generally outside margins.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: Yellow staining on anterior margin, throughout central and posterior portions of print, and outside anterolateral margin.

Root damage: Rootlet penetrated tuff outside of lateral margin and traversed through the tuff, exiting and re-entering tuff in the area of the arch.

Insect activity:

Out worm pupal cases: Cast of pupal case in tuff outside lateral margin (.06 x 1cm)

## 1995 Interventions

Consolidation/stabilization: Heavily weathered fragment in heel area stabilized with acrylic dispersion. Powdering tuff outside posterior margin was consolidated with WS-24 @ 33%.

Fills: none

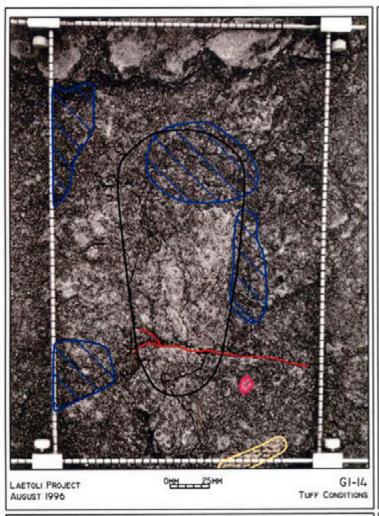
Reattachment: none

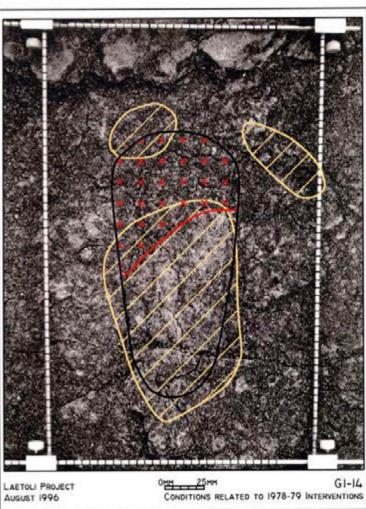
Root treatment: Surface roots removed; subterranean root left in situ.

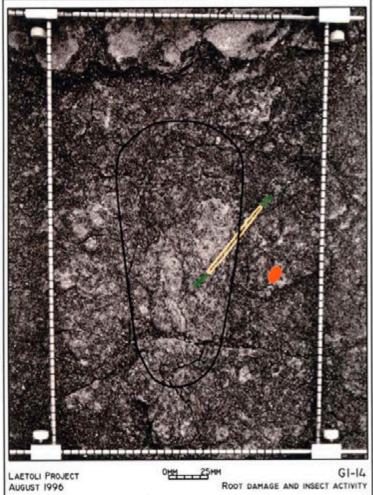
Other: Sample of yellow resin at the heel margin taken for analysis (identified by IR spectroscopic analysis as cellulose nitrate).

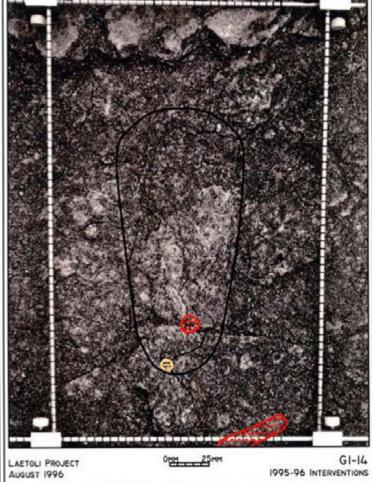
## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed loss of resolution of surface detail as a result of weathering and embedding, especially in anterior portion; more extensive weathering of the fractured tuff around the print and beginnings of weathering in the smooth floor of the print; and insect activity since 1978.

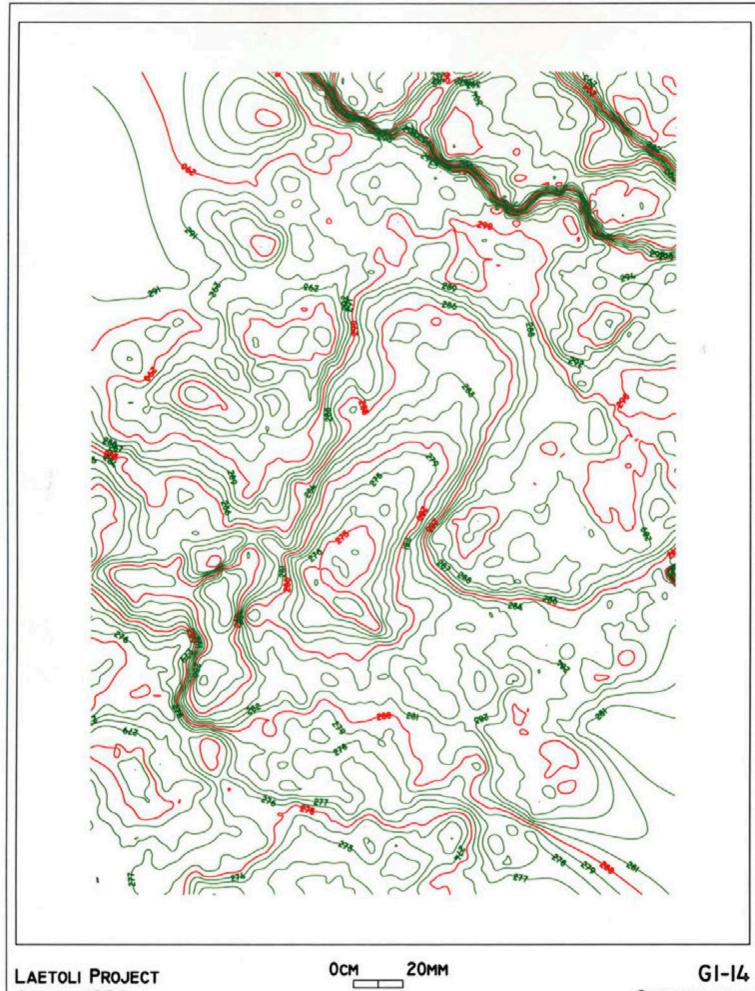








1995-96 INTERVENTIONS



CONTOUR MAP

Condition Record G1-15: Left

## Location

Northern sector of trackway, trench 6.

## Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-13 to 18. Depressions in the lower part of the tuff. Recognizable as footprints but not sufficiently well preserved to be measured, and retaining no morphology. G1-13 left, G1-14 right, G1-15 left, G1-16 to G1-18 indeterminate.

## 1996 Condition

General condition: Moderate alteration: Fair. Based on condition of tuff in general area since no print is visible. No individual graphic condition record. Condition of tuff in area of G1-15 recorded on Polaroid flyover X-2, 1996.

## 1996 Interventions

Interventions in area of G1-15 recorded on Polaroid flyover X-2, 1996.

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with photos showed increased weathering of tuff in this area and embedding of particles in weathered tuff.

## Notes

Location of print depression as identified in 1978 based on recognizable features in the surrounding tuff.

Northern sector of trackway, trench 6.

#### Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-13 to 18. Depressions in the lower part of the tuff. Recognizable as footprints but not sufficiently well preserved to be measured, and retaining no morphology. G1-13 left, G1-14 right, G1-15 left, G1-16 to G1-18 indeterminate.

## 1996 Condition

General condition: Moderate alteration: Fair. Based on condition of tuff in area of G1-16. No individual graphic condition record. Condition of tuff in area of G1-16 recorded on Polaroid flyover X-2, 1996.

## 1996 Interventions

Interventions in area of G1-16 recorded on Polaroid flyover X-2, 1996.

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed increased weathering of tuff in this area and embedding of particles in weathered tuff.

#### Notes

Only the general area of the depression identified as a print in 1978 could be located in 1996 based on recognizable features of the tuff.

Northern sector of trackway, trench 6.

#### Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-13 to 18. Depressions in the lower part of the tuff. Recognizable as footprints but not sufficiently well preserved to be measured, and retaining no morphology. G1-13 left, G1-14 right, G1-15 left, G1-16 to G1-18 indeterminate.

## 1996 Condition

General condition: Moderate alteration: Fair. Based on condition of tuff in area of G1-17. No individual graphic condition record. Condition of tuff in area of G1-17 recorded on Polaroid flyover X-2, 1996.

## 1996 Interventions

Interventions in area of G1-17 recorded on Polaroid flyover X-2, 1996.

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed increased weathering of tuff and embedding of particles in weathered areas.

#### Notes

Only the general area of the depression identified as a print in 1978 could be located in 1996 based on recognizable features of the tuff.

Northern sector of trackway, trench 6.

## Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

G1-13 to 18. Depressions in the lower part of the tuff. Recognizable as footprints but not sufficiently well preserved to be measured, and retaining no morphology. G1-13 left, G1-14 right, G1-15 left, G1-16 to G1-18 indeterminate.

## 1996 Condition

General condition: Significant alteration: Poor. Based on condition of tuff in area of G1-18. No individual graphic condition record. Condition of tuff in area of G1-18 recorded on Polaroid flyover IX-2, 1996.

## 1996 Treatments

Interventions in area of G1-18 recorded on Polaroid flyover IX-2, 1996.

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed a significant increase in weathering of tuff; embedding of particles in weathered areas; and penetration of tuff by roots.

#### Notes

Only the general area of the depression identified as a print in 1978 could be located in 1996 based on recognizable features of the tuff.

Northern sector of trackway, trench 6

## Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

#### 1978-1979 Description

Well preserved left footprint.

## 1996 Condition

General condition: Significant alteration: Poor

## Tuff conditions:

Weathering: Extensive and severe weathering throughout the print and surrounding tuff (with cracking to 0.5cm depth in 1-2 cm polygons).

Cracking: Two cracks in toe and heel area seen in 1978 photos were still evident in 1996 (not shown on graphic) but had merged with network of polygonal cracking of weathered tuff.

Losses: none

<u>Detached/loose tuff</u>: Areas of tuff along axis of print and outside margin of heel were loose. Tuff was also disrupted along the length of the root that traversed print.

Powdering: none

Other: none

## Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Traces of Bedacryl stringers between cracks were found in the heel and arch portions. <u>Embedding</u>: Embedding of fine particles in weathered areas and within cracks of weathered tuff.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Large 5mm root penetrated tuff on interior lateral side near the arch, and progressed through the tuff, exiting and re-entering the tuff at the heel. Tuff was adhered to the root, and was disrupted along its length.

Insect activity: none

## 1996 Interventions

Consolidation/stabilization: The weathered tuff was stabilized with injections of acrylic dispersion where it was loose and where disrupted by root penetration, @ 25 and 33% WS-24, respectively. Fills: none

#### Reattachment: none

Root treatment: Only the exposed portion of the root was removed. The subterranean root could not be removed without disrupting tuff.

Other: none

## Comparison with 1978-79 Cast/Photograph

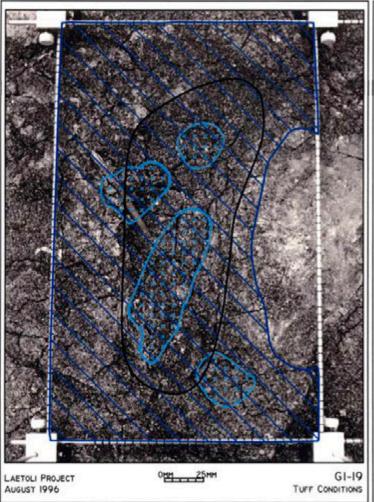
Comparison with 1978 cast and photos showed a marked difference in the appearance of the print. The print shape was still clearly defined, but had lost surface details due to severe weathering of the tuff surface and particle embedding; and was damaged by penetration of root in lateral arch area.

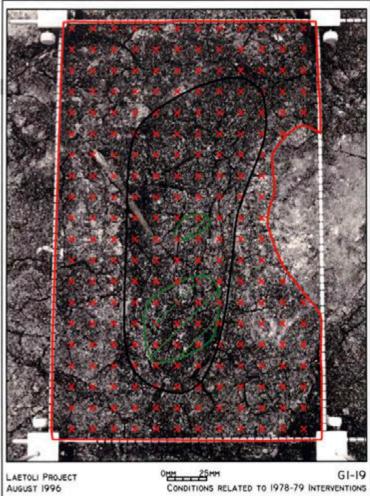
#### Notes

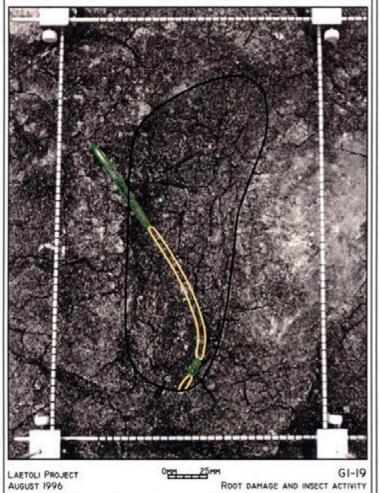
The 1978 reburial fill was wet on initial excavation; fill consisted of fines and pebbles, some in the upper fill up to 2cm. Fill was very consolidated at the heel area; remainder of fill lightly compacted and separated easily from tuff.

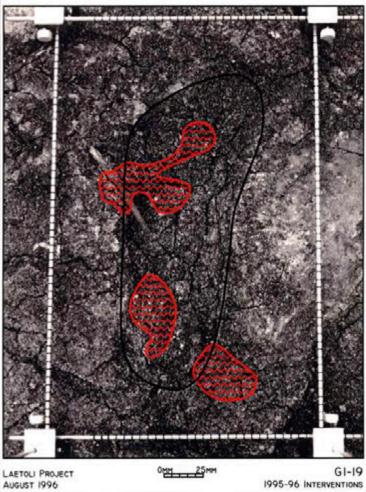
Monitoring of G1-19 (with a 10x scale loop) showed widening of cracks up to 0.8mm over the 6 and a half weeks it was exposed; see 1996-1998 Report on the Laetali Project, Appendix III-C for results of crack monitoring.

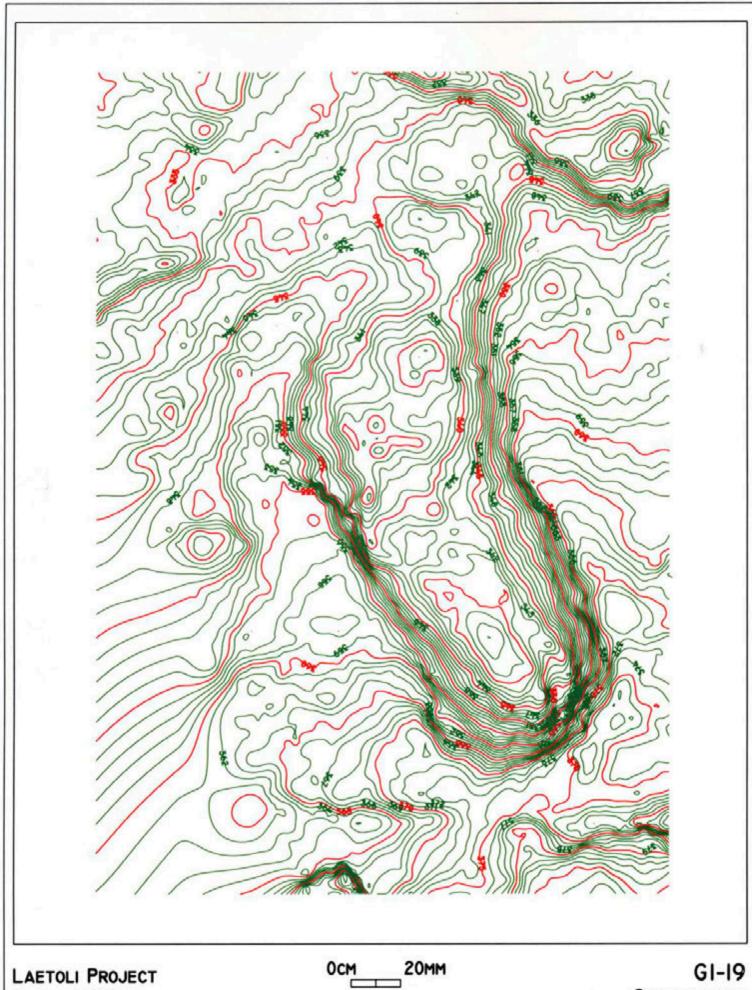
Removal of matrix by T. White from G1-19 in 1978 was well documented; matrix was cast before removal and is now preserved in the Olduvai Museum.











CONTOUR MAP

Northern sector of trackway, trench 6.

## Excavation History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

Irregular depression, probably representing right foot, from the position in the trail.

## 1996 Condition

General condition: Moderate alteration: Fair. Based on condition of tuff in area of G1-20. No individual graphic condition record. Condition of tuff in area of G1-20 recorded on Polaroid flyovers IX-3 1996.

## 1996 Treatments

Interventions in area of G1-20 recorded on Polaroid flyovers IX-3 1996.

## Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed an increase in weathering of the tuff and embedding of particles in weathered tuff.

#### Notes

The depression identified as a print in 1978 was located in 1996 based on recognizable features of the tuff.

Northern sector of trackway (in the graben), trench 6

## Excavation and Reburial History

Print outline excavated and reburied in 1978 (infill of print not excavated in 1978); print outline reexcavated and reburied in 1996

## 1978-1979 Description

Left footprint. The filling was not removed on account of extreme hardness but the rim is clearly defined.

## 1995 Condition

General condition: Moderate alteration: Fair (unexcavated matrix)

#### Tuff conditions:

<u>Weathering</u>: Extensive weathering of surface. Edges of print were stable at the toe and heel portions where 1978 excavation revealed calcite layer, but remaining infill matrix was weathered; weathering continued beyond lateral and medial margins of print.

Cracking: Crack with traces of calcite runs through infill matrix parallel to the medial margin.

Losses: none

<u>Detached/loose</u>: Infill matrix was loose from cracking, as were weathered areas of tuff outside print margin.

<u>Powdering</u>: Powdering surface throughout unexcavated infill matrix and outside lateral and medial margins.

Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Moderate to severe embedding in weathered areas of tuff.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Rootlets on surface outside of lateral portion of print.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: Surface of infill matrix treated with single coat of WS-24 at 10% in water to reduce powdering. Weathered tuff outside of medial margin was stabilized with WS-24 at 25%.

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

Other: none

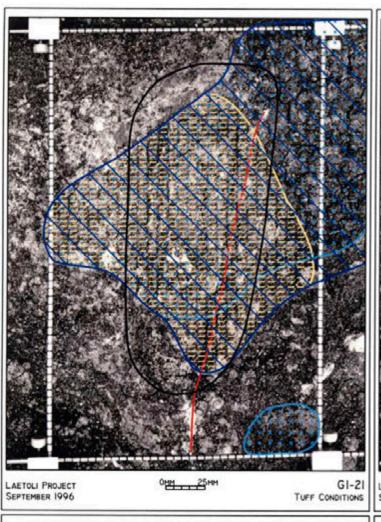
## Comparison with 1978-79 Cast/Photograph

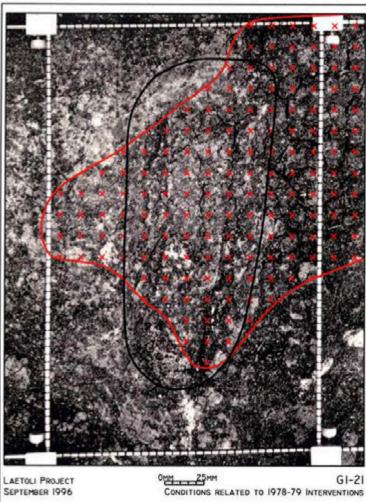
No cast. Comparison with 1978 photos showed significant increase in weathering of unexcavated matrix, as well as embedding of particles and powdering of surface of weathered tuff.

Notes

Heel and anterior margin of print were well defined in 1978, leaving remainder of print with grey infill matrix. The calcite skin lining the print was visible in the heel and anterior margins. Assessment of condition based on examination of the unexcavated matrix.

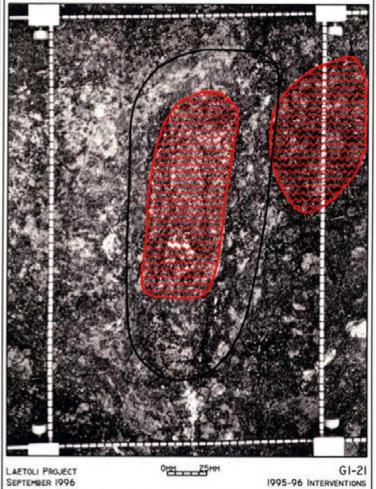
The 1978 fill in graben was very wet when excavated in 1996.

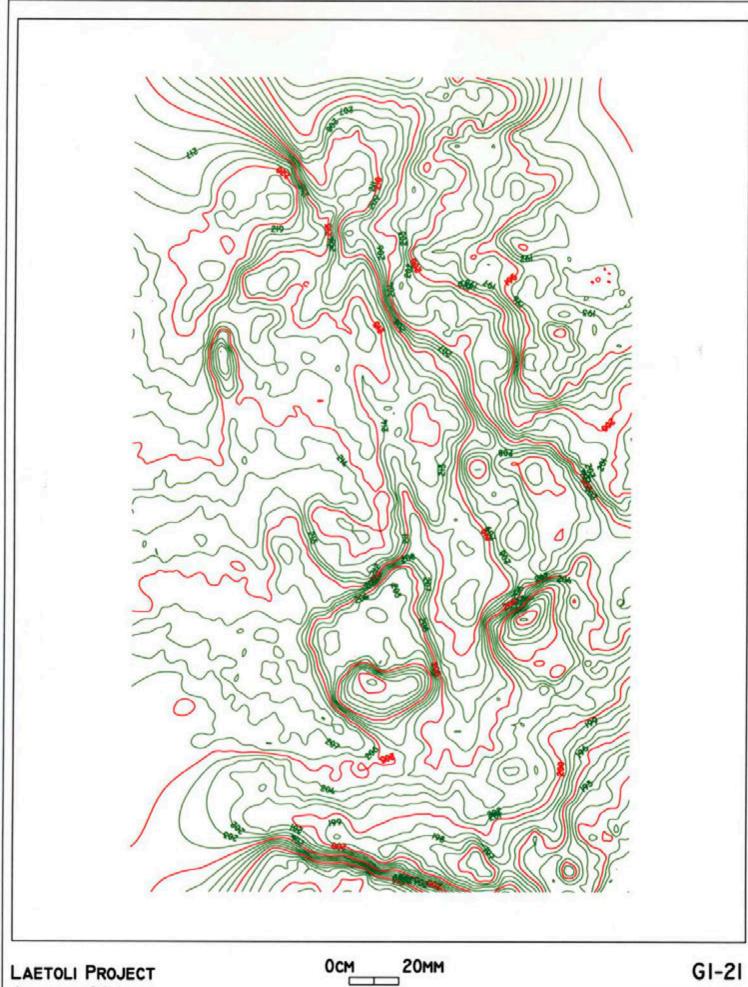






ROOT DAMAGE AND INSECT ACTIVITY





GI-21 CONTOUR MAP

Northern sector of trackway (in the graben), trench 6.

## Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

#### 1978-1979 Description

Complete right footprint.

#### 1996 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

<u>Weathering</u>: Widespread, moderate weathering of tuff in and beyond print margins, with patches of well calcified tuff showing incipient weathering in the form of pattern cracking.

Cracking: none

Losses: none

<u>Detached/loose tuff</u>: Loose tuff in area of great toe and on lateral margin; and outside medial and anterior margins.

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: Slight traces of Bedacryl stringers in the anterolateral region.

Embedding: Embedding of fine particles in the heel, lateral margin, and the great toe area.

Silicone: Numerous traces of silicone outside the lateral margin of the print.

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Small rootlet (<1mm diam.) penetrated heel margin of print. Root <5mm diam. and numerous small rootlets penetrated tuff outside of print and left impressions on tuff surface when removed.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Loose tuff outside print margin was stabilized with WS-24.

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

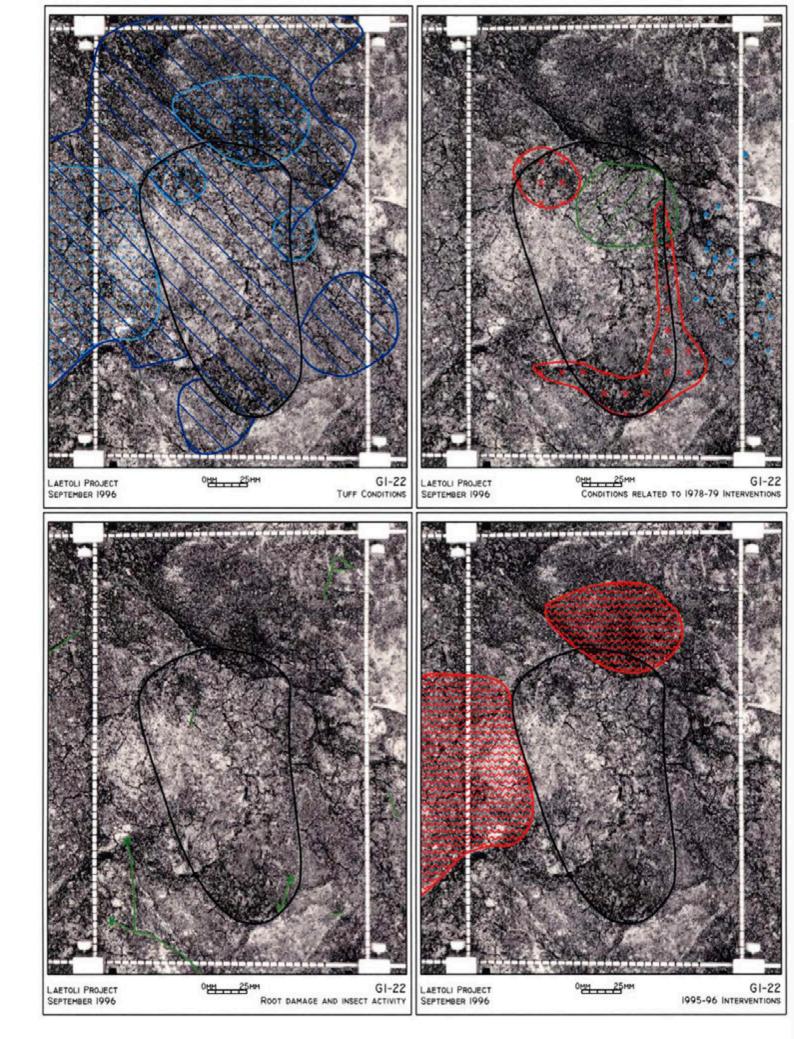
Other: none

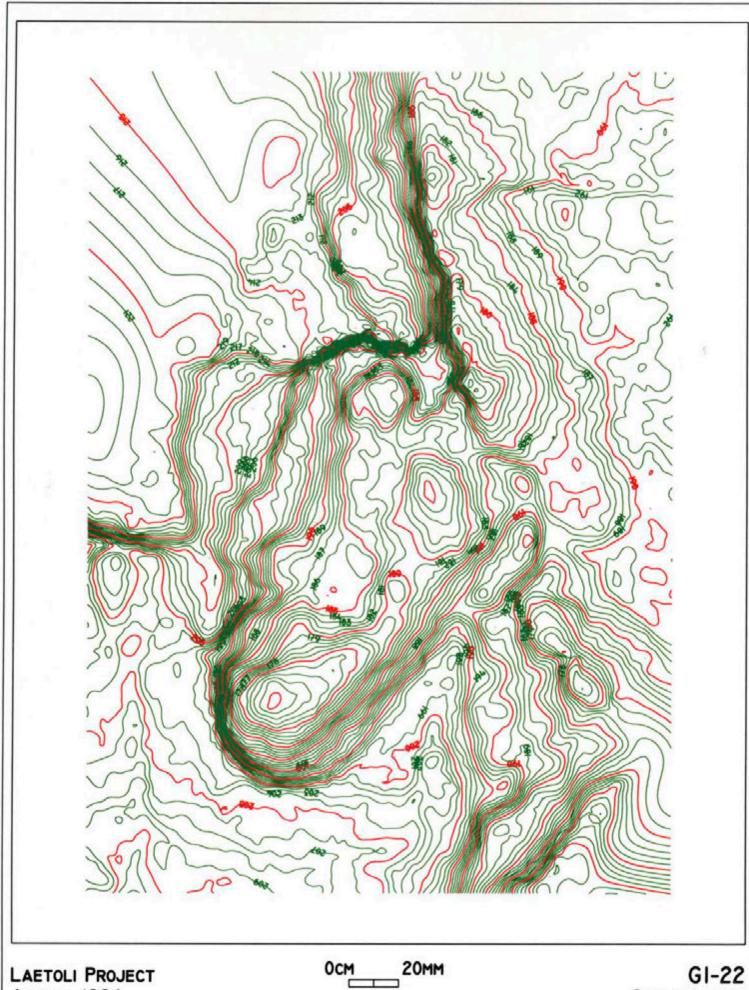
## Comparison with 1978-79 Cast/Photograph

Comparison with 1978 cast and photos showed very slight loss of resolution of features in the lateral portion of the print; and new weathering of tuff.

#### Notes

G1-22 is the only one of the three prints in the graben whose fill matrix was excavated in 1978. 1978 reburial fill was very wet when excavated in 1996, with large pebbles up to 5mm in diam. in close proximity to tuff surface.





AUGUST 1996

CONTOUR MAP

Northern sector of trackway (in the graben), trench 6

# Excavation and Reburial History

Outline of print was excavated and reburied in 1978 (infill of print not excavated in 1978); reexcavated and reburied in 1996.

## 1978-1979 Description

Complete left footprint. Again, it was impracticable to remove the filling but the form of the print is clear.

## 1996 Condition

General condition: Significant alteration: Poor (unexcavated matrix)

#### Tuff conditions:

Weathering: Moderate to significant weathering of unexcavated matrix of print and surrounding tuff, especially on lateral side.

Cracking: Cracks with calcite veins traversed the center of the print and were evident outside the margin of the print.

Losses: Slight loss of surface of unexcavated tuff matrix from abrasion during removal of embedded fines in anterior and center of print.

Detached/loose tuff: Loose tuff in weathered areas, including unexcavated matrix.

Powdering: Unexcavated tuff matrix of print exhibited powdering on surface.

Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding of fine particles in weathered tuff, especially in heel area.

Silicone: none

Excavation tool marks: Marks of scoring on unexcavated matrix were visible along external rim of print (not shown on graphic; see comparison with photographs).

Inventory number on tuff: none

Other: none

Root damage: Numerous small rootlets penetrated tuff outside of print in heel area (not shown on graphic). Root impression in tuff outside anterior margin of print.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Portions of the loose, weathered tuff on exterior of print were stabilized with WS-24 at 25%.

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

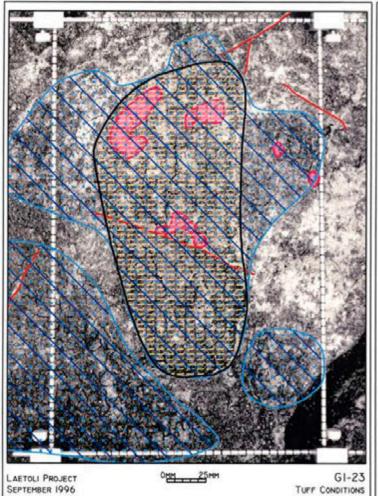
Other: none

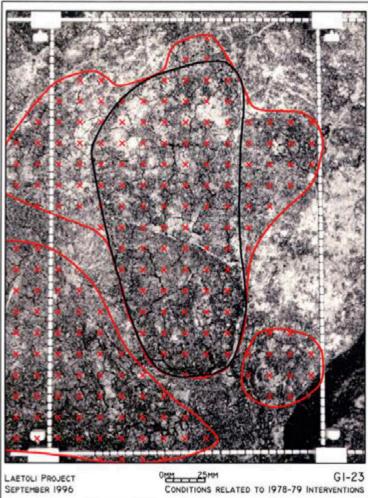
# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with 1978 photos showed loss of resolution of fine details, such as excavation scoring along rim and a fossilized insect burrow outside anterior margin, as a result of weathering and particle embedding in tuff. Shape and features of the print in 1978 were still very clear *in situ*, including print margin and the calcite vein that transects the matrix in the print at the arch portion, but the unexcavated matrix and surrounding tuff had weathered significantly; tuff was embedded with particles; and matrix was loose and powdering.

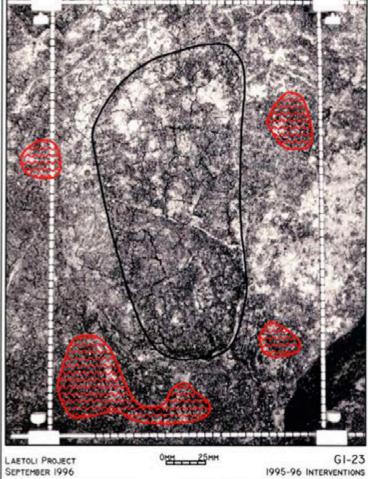
Notes

Excavated 1978 reburial fill was very wet throughout the graben in 1996. Unexcavated tuff matrix in print was cracked and loose, and appeared as though it would release easily from the substrate of the print. Heel area excavated in 1978 to a slightly greater depth than surrounding matrix; the calcite lining of the print along the heel margin was clearly visible and intact.

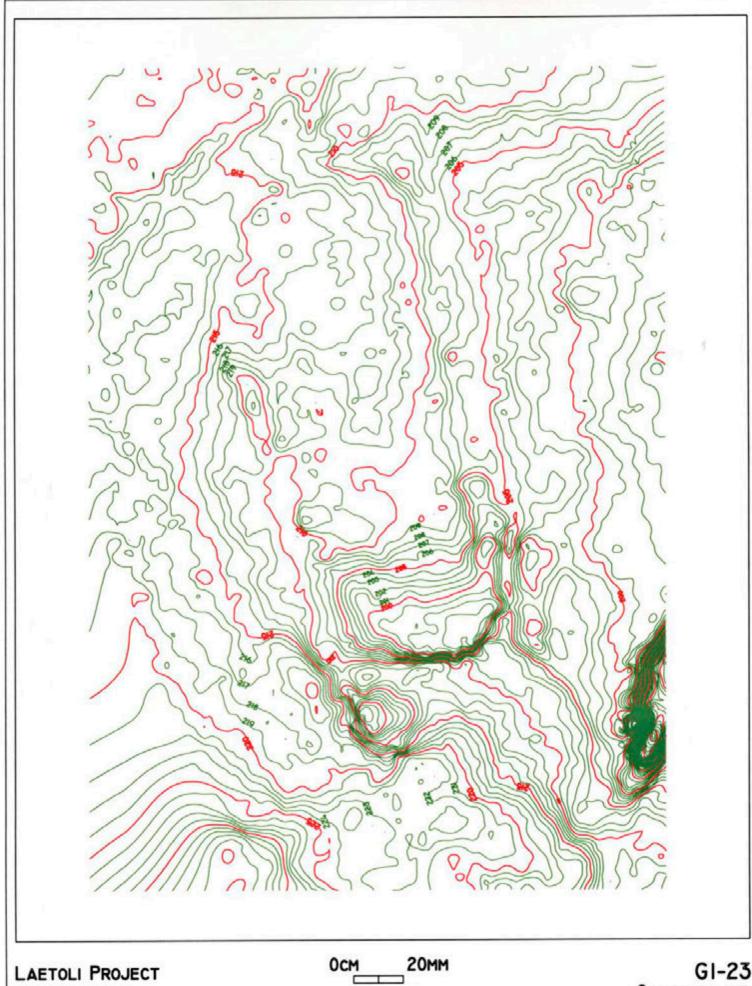








1995-96 INTERVENTIONS



GI-23 CONTOUR MAP

Middle sector of trackway, trench 4.

#### Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

#### 1978-1979 Description

Complete right footprint.

# 1995 Condition

General Condition: Minor alteration: Good

# Tuff conditions:

Weathering: Slight weathering of tuff on floor and margins of the print; and outside lateral and anterior margins. Elsewhere embedding obscures the well-consolidated tuff that characterizes this area.

Cracking: Hairline cracks in central portion of print; and outside anterior margin.

Losses: none

Detached/loose tuff; none

Powdering: none Other: none

# Condition related to 1978-79 interventions:

Bedacryl: Bedacryl was not visible in situ, but can be seen on 1978 photos as a distinct halo around the print.

Embedding: Moderate embedding of fine particles on the interior portion of the print; and outside anterior margin, particularly within weathered areas.

Silicone: Traces of silicone on the interior of the print; and outside of anterior margin of print.

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Numerous small roots and rootlets (<1mm diam.) on surface and penetrating tuff or the layer of embedded particles. Roots identified as asparagus and acacia.

Insect activity: none

## 1995 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

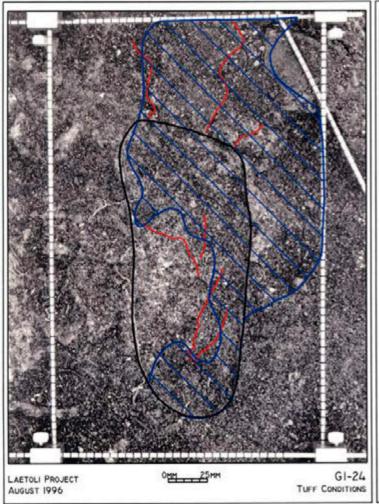
Other: none

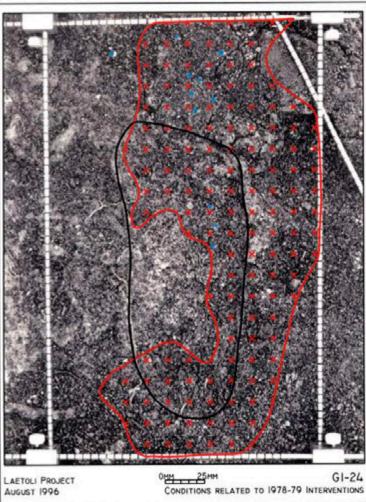
#### Comparison with 1978-79 Cast/Photograph

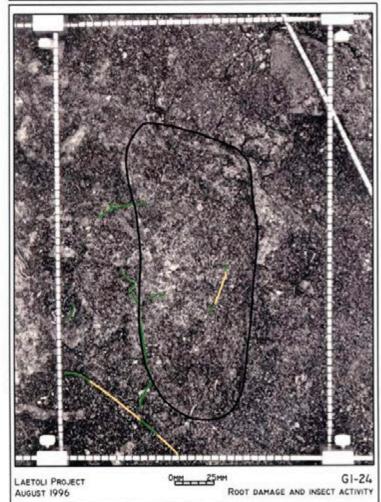
Comparison with 1978 cast and photos showed slight loss of resolution of fine detail on the surface due to weathering and embedding; and additional weathering of lateral margin, toe and heel. Bedacryl halo visible on 1978 photographs was not visible *in situ* (probably obscured by weathering and embedding).

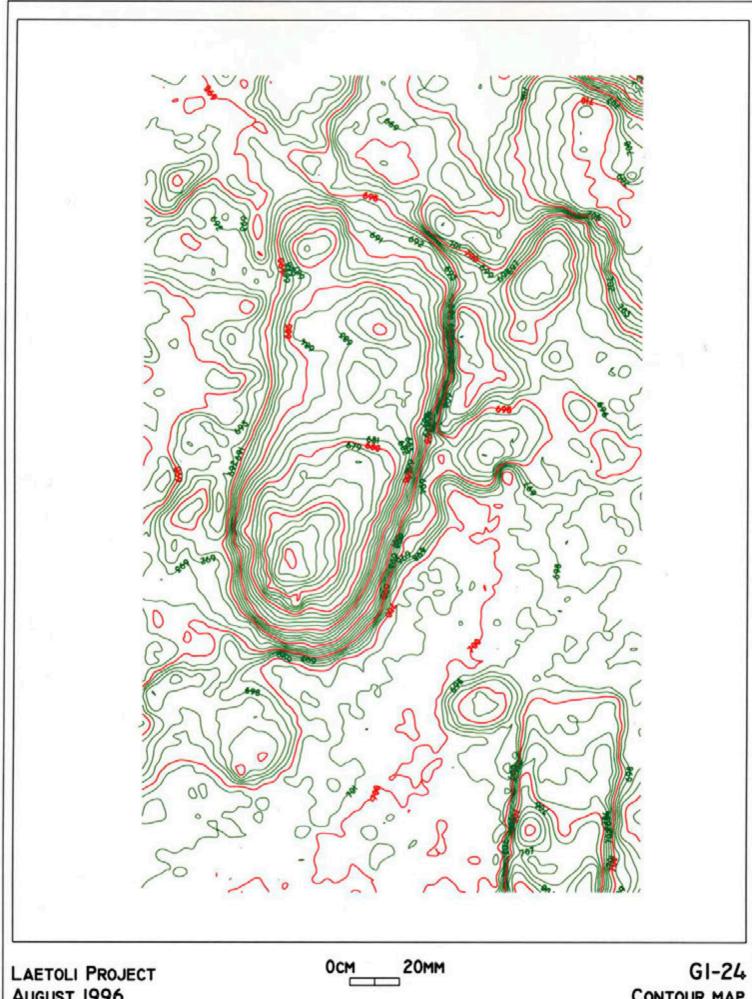
#### Notes

The 1978 reburial fill was compacted, but easily removed; some pebbles (0.5cm average) in heel area slightly impressed in tuff surface. After drying, many of the embedded particles could be easily removed.









AUGUST 1996

CONTOUR MAP

Southern sector of trackway, trench 2.

#### Excavation and Reburial History

Partially excavated and reburied in 1978; excavated and reburied in 1979; re-excavated and reburied in 1992 and 1993 for assessments; re-excavated and reburied in 1995.

# 1978-1979 Description

Particularly well preserved right footprint with calcite crust on the interior.

## 1995 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: none

Cracking: Hairline cracks on interior of print, and extending outside anterior and medial margins

Losses: none

Detached/loose tuff: none

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl found throughout most of the print, except in the central portion where it was missing, and outside margins of print. Patches of Bedacryl deteriorated along anterior and lateral margins. Area of missing Bedacryl creates a marked color difference with the Bedacryl coated parts (see Notes).

Embedding: none Silicone: none

Excavation tool marks: none

Inventory number on tuff: 1979 label ("1-25") visible on tuff surface.

Other: none

Root damage: A few rootlets on the surface of tuff in anterior portion and a root mat outside margins of print.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Rootlets removed.

Other: none

#### Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed slight loss of resolution of some of the finer details on the print, including tool marks on the heel of the print, which were visible on the cast. The photographs and cast showed a rectangular-shaped depression on the lateral side of the print at midpoint, which was only faintly visible on the print in situ.

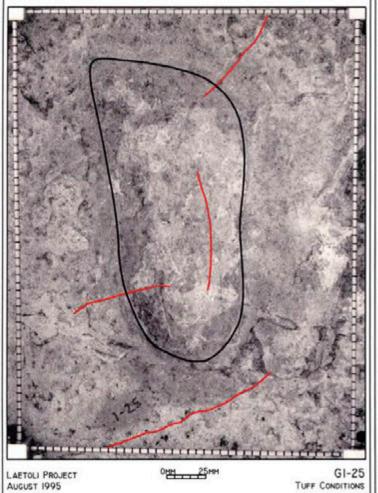
#### Notes

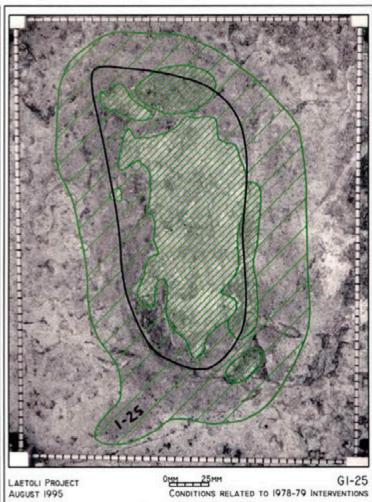
The reburial fill excavated in 1995 consisted of fine sifted sand from the 1993 assessment reburial. The upper two-thirds brushed away quite easily, the lower level was slightly more compacted. At the tuff interface some of the sand was moderately adhered, but could be removed by gentle brushing.

The condition of the print appeared unchanged from the 1993 assessment. It is surmised that the Bedacryl layer at the bottom of the print was removed during the molding process in 1979.

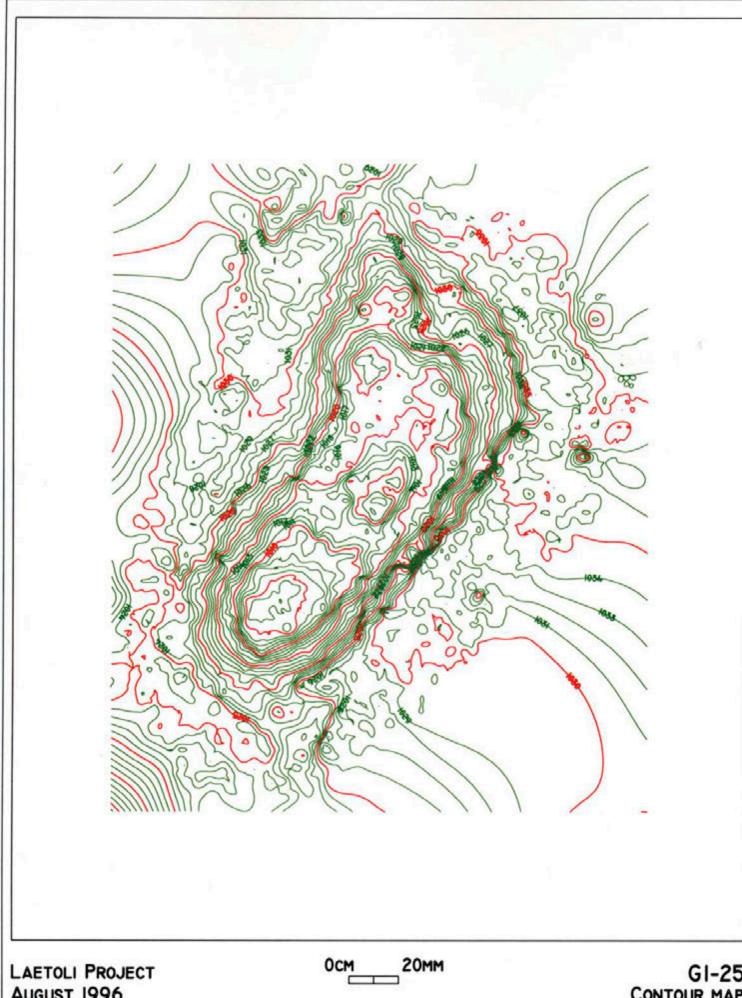
The 1995 field cast showed several surface irregularities, which were the result of 1995 repairs of the master mold from which the cast was made; these were taken into account in comparing the print with the cast.

L. Robbins photographs from 1978 appear to show the print before it was fully excavated.









GI-25 CONTOUR MAP

Southern sector of trackway, trench 2.

## Excavation and Reburial History

Partially excavated and reburied in 1978; excavated and reburied in 1979; re-excavated and reburied in 1995.

# 1978-1979 Description

Well preserved left footprint, the toes have been partially destroyed by a superimposed ?carnivore print.

# 1995 Condition

General condition: Minor alteration: Good

## Tuff conditions:

Weathering: none

<u>Cracking:</u> Prominent crack with calcite vein traverses print along medial margin and extends beyond margins of print.

Losses: Two minor areas of tuff loss noted outside margin of carnivore print (anterior to the hominid print), but these are also evident on the 1979 cast (see also Bedacryl).

Detached/loose tuff: none

Powdering: none Other: none

Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl throughout most of the print and surrounding it, though the layer had severely deteriorated in posterior half of print. Bedacryl appears to have been applied in a thin coat to this print. Two small patches of missing Bedacryl on the margins of the carnivore print correspond with tuff loss, indicating detachment during molding in 1979.

Embedding: none Silicone: none

Excavation tool marks: Tool marks on the floor of the print not recorded in condition survey, but were recorded in geological survey.

Inventory number on tuff: 1979 label ("1-26") visible on tuff surface.

Other: none

Root damage: Numerous tiny rootlets (graphically shown as root mat) weaved in and out of the deteriorated Bedacryl layer but did not appear to penetrate the footprint tuff.

Insect activity: none

## 1995 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

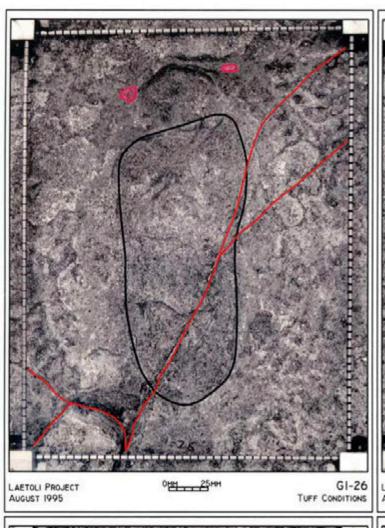
Other: Bedacryl cleaned from interior of this print (including superimposed carnivore print) with acetone and brushes (see Report on the 1995 Field Season for details of removal).

## Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed very little loss of resolution of features despite the presence of the Bedacryl layer, and probably due to the application of a thin coat. Details on the cast and the 1979 photographs, such as a calcite vein traversing the heel, were clearly visible in the print in situ.

Notes

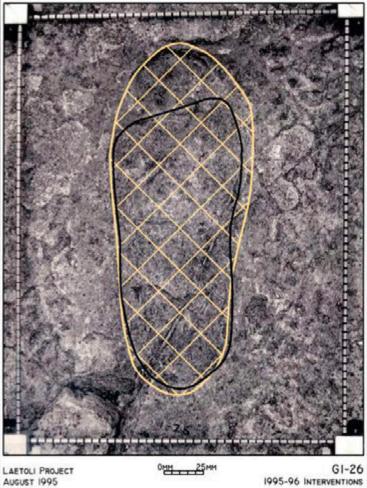
Cast imperfections evident in the 1995 field cast were related to repairs made to the master mold in 1995.

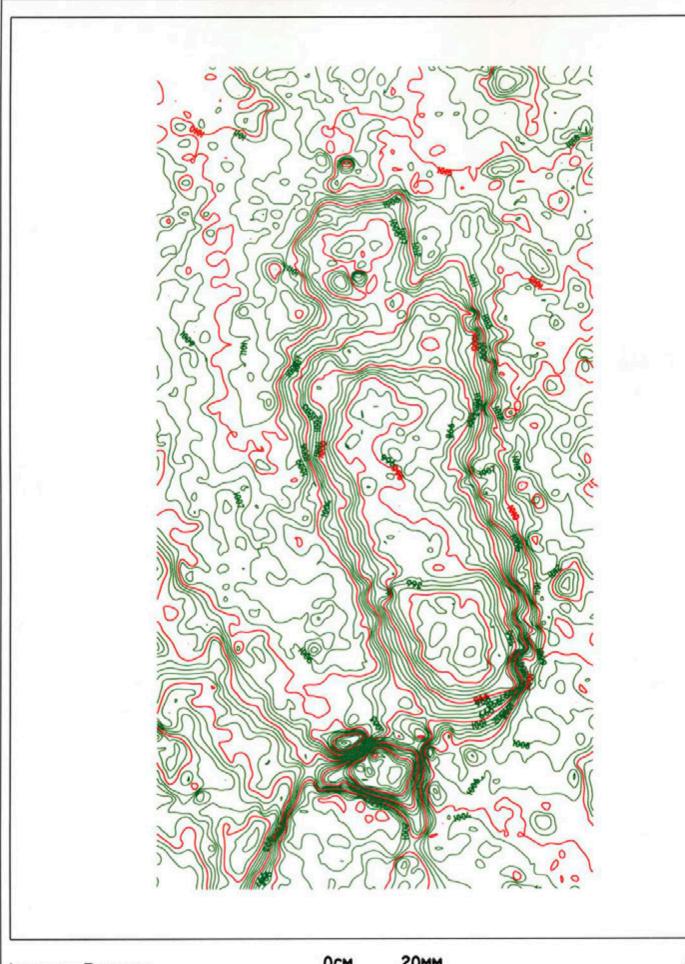






ROOT DAMAGE AND INSECT ACTIVITY





0cm\_ 20MM

GI-26 CONTOUR MAP

Southern sector of trackway, trench 2.

# Excavation and Reburial History

Partially excavated and reburied in 1978; fully excavated and reburied in 1979; re-excavated and reburied in 1995.

# 1978-1979 Description

Well preserved right footprint.

# 1995 Condition

General condition: Minor alteration: Good

# Tuff conditions:

Weathering: none

Cracking: Crack traverses print; network of cracks with calcite vein outside medial margin.

Losses: none

Detached/loose: none Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout the print and surrounding it. Deteriorated near the great toe and scuff-out area, along the margins of the heel, and just outside lateral margin.

Embedding: Slight embedding of fine particles in Bedacryl layer.

Silicone: Extensive traces of silicone outside medial margin of print; minor traces outside lateral margin of heel area.

Excavation tool marks: Tool marks faintly visible on floor of print (not recorded on graphic; see comparison with cast).

Inventory number on tuff: 1979 label ("1-27") visible on tuff surface.

Other: none

Root damage: Numerous tiny rootlets on surface and matted in ball of foot and scuff-out area, but did not penetrate the footprint tuff. One rootlet left impression in tuff on lateral posterior margin.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

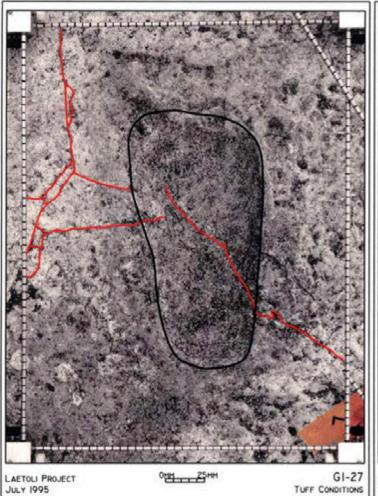
Reattachment: none

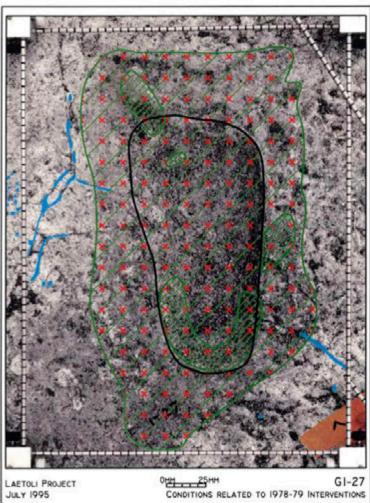
Root treatment: Surface rootlets removed.

Other: none

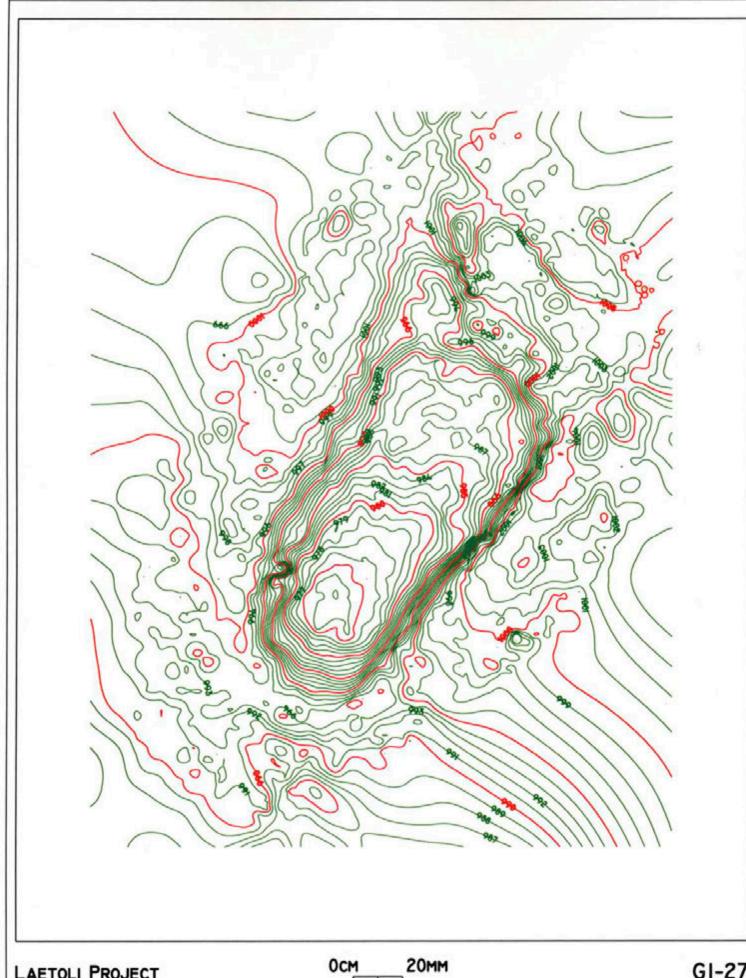
## Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed loss of resolution of the fine details on the interior of the print, particularly the excavation tool marks, which are obscured by the Bedacryl layer and fine particles embedded in that layer, but are visible in the cast. Crack traversing print is clearly visible in cast and photos.









GI-27 CONTOUR MAP

Condition Record G1-28: Left

#### Location

Southern sector of trackway, trench 2.

## Excavation and Reburial History

Excavated and reburied in 1979; partially exposed and reburied in 1992 and 1993; re-excavated and reburied in 1995.

#### 1978-1979 Description

Very weathered heel print, eroded and damaged by root action, its position in the trail indicates a left footprint.

# 1995 Condition

General condition: Significant alteration: Poor condition

#### Tuff conditions:

Weathering: Extensive weathering of tuff in floor of print and extending beyond margins of the print. G1-28 is located in the weathered strip of tuff in the southern trackway sector, characterized by patterned cracking with patches of well-consolidated tuff.

<u>Cracking:</u> Large crack with partially preserved calcite outside anteromedial margin; a second crack runs perpendicular to the axis of the print, outside medial margin.

Losses: Small fragments of tuff loss just outside anteromedial heel margin.

Detached/loose tuff: Loose tuff anterior to print (associated with root disruption), and at heel margin.

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout the print and surrounding it. Deteriorated with minor patches of loss in the weathered area.

Embedding: Embedding of fine particles in weathered areas.

Silicone: Numerous traces of silicone in and around print.

Excavation tool marks: none

Inventory number on tuff: (see Comparison)

Other: none

<u>Root damage</u>: Tuff was disrupted and loose from a large penetrating root outside anterior margin; the root was from stump no. 84. A second root penetrated the tuff well outside the posterior margin. Surface roots left three impressions in the tuff (one inside and two outside the print margins). Numerous small roots weaved through the cracked, weathered tuff.

Insect activity: none

#### 1995 Interventions

<u>Consolidation/stabilization</u>: Loose areas of tuff treated with Acrysol WS-24 at full bottle strength. <u>Fills</u>: The void from removal of subterranean root outside anterior margin was filled by injection with a WS-24 and fumed silica paste

Reattachment: none

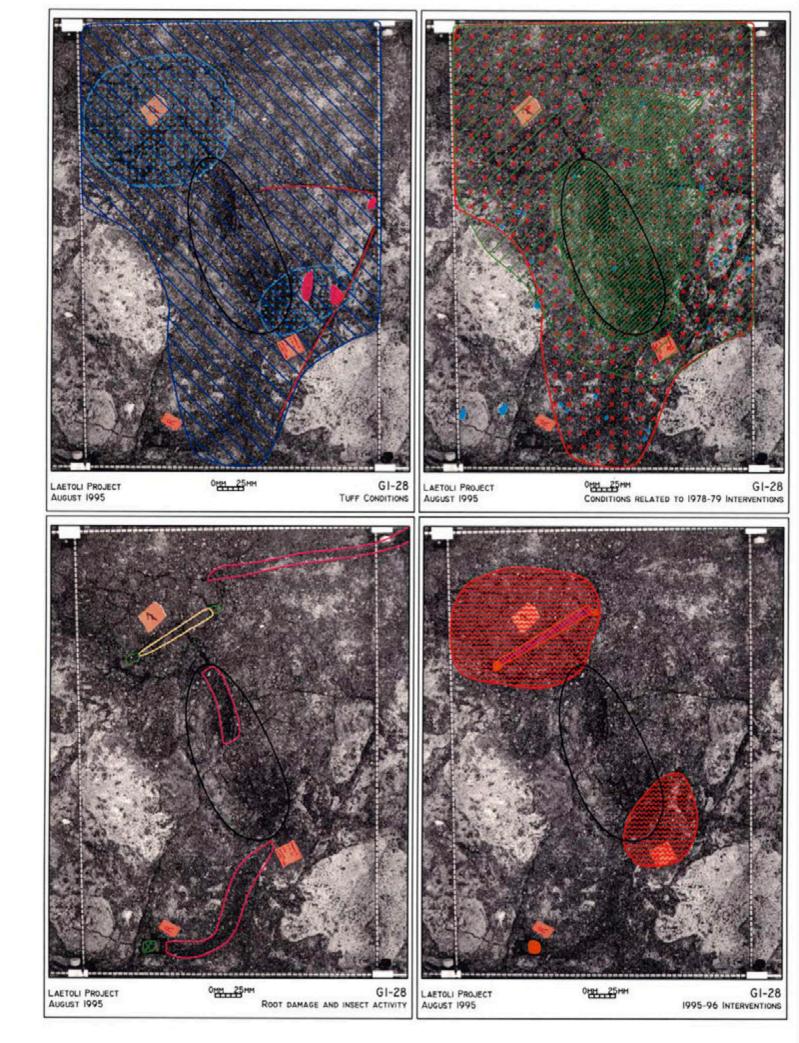
Root treatment: Subterranean root outside anterior margin was removed. Subterranean root outside heel margin left in situs roots cut at point of penetration.

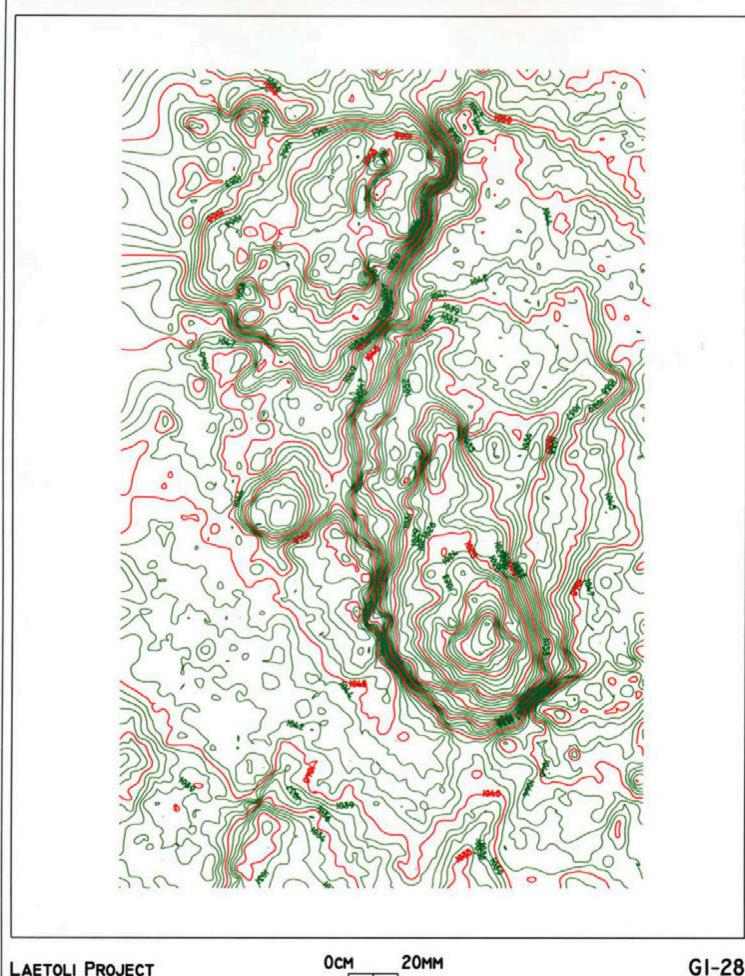
Other: none

Comparison with 1978-79 Cast/Photograph
Cast was made prior to complete excavation of print and therefore of limited value. Comparison with 1979 photos showed increased weathering of tuff; slight enlargement of crack outside medial margin in arch area and loss of calcite in crack outside medial margin; and disruption of tuff by roots. The inventory number on the tuff can be seen in the 1979 photos but was not identified in situ on the condition graphic, probably obscured by embedding and orange treatment tape at the time of recording.

## Notes

Printed condition graphic shown at a different scale than other G1 prints because wire framing was incorrectly enlarged for this Polaroid.





GI-28 CONTOUR MAP

Southern sector of trackway, trench 2.

# Excavation and Reburial History

Excavated and reburied in 1979; partially exposed and reburied in 1992 and 1993; re-excavated and reburied in 1995.

## 1978-1979 Description

Right footprint, complete but damaged by erosion and root action.

#### 1995 Condition

General condition: Moderate alteration: Fair

# Tuff Conditions:

Weathering: Extensive weathering of tuff inside print in anterior and heel areas; and outside anterior and lateral margins. G1-29 is located in the weathered strip of tuff in the southern sector of the trackway, characterized by patterned cracking with deep fissures that are filled with overburden.

Cracking: Cracks are associated with weathering of tuff in this area (not shown on graphic).

Losses: none

Detached/loose tuff: Patch of loose tuff on lateral margin.

Powdering: none

Other: Void in the tuff in the area of the lateral heel margin.

# Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout print and surrounding tuff.

Embedding: Embedding of fine particles predominant in weathered areas.

Silicone: Minor traces of silicone inside and outside print margin.

Excavation tool marks: none

Inventory number on tuff: 1979 label ("1-29) still visible on tuff.

Other: none

Root damage: Root impression from large surface root outside posterior margin; root penetrated tuff at eastern end of impression.

Insect activity: none

## 1995 Interventions

Consolidation/stabilization: none

Fills: none

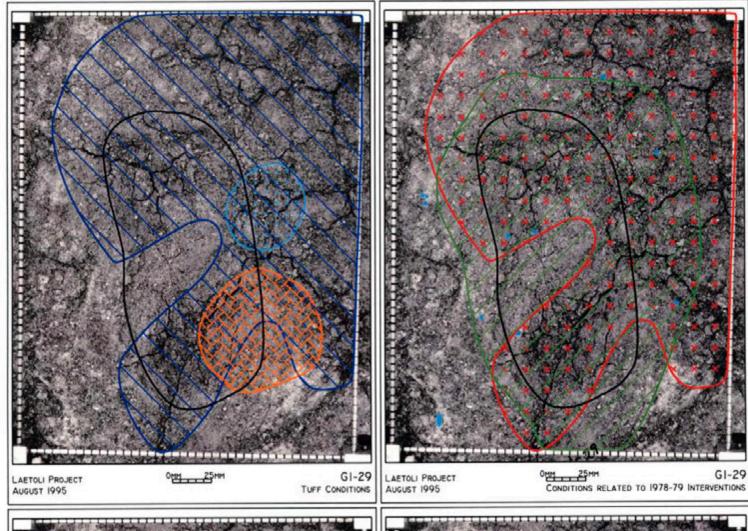
Reattachment: none

Root treatment: Root penetrating tuff was cut.

Other: none

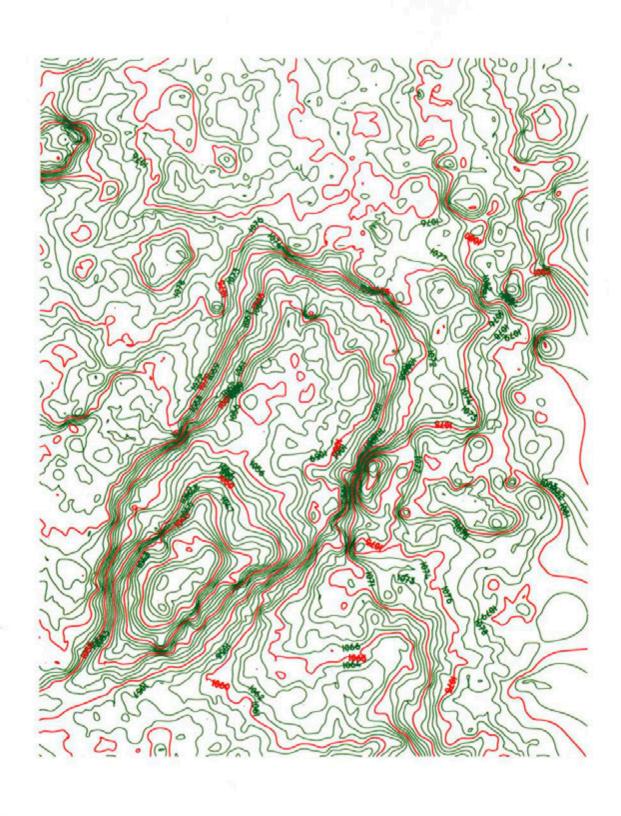
# Comparison with 1978-79 Cast/Photograph

Cast was made prior to complete excavation of the print and therefore is of limited value. Comparison with the 1979 photos showed the footprint in situ to be more cracked from weathering (particularly in the anterior and heel portions) than in 1979, although from written, photographic and cast documentation it is clear that the print was in poor condition in 1979. A cut acacia tree stump is visible in 1979 photos approximately 10cm northwest of anterior margin of print and an extensive network of rootlets is visible in the weathered tuff before final excavation of print.









0cm\_\_\_\_20mm

GI-29 CONTOUR MAP

Southern sector of trackway, trench 2.

# Excavation and Reburial History

Excavated and reburied in 1979; partially exposed and reburied in 1992 and 1993; re-excavated and reburied in 1995.

# 1978-1979 Description

Left footprint also cracked and damaged by roots, especially by a young A cacia tree growing through the centre of the print.

# 1995 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Moderate weathering of tuff inside print margins; extensive weathering outside lateral and posterior margins. Patches of well-consolidated but fragmented tuff within print margins and outside anterior and medial margins. This print is located within the weathered strip of tuff in the southern sector of the trackway, characterized by patterned cracking with deep fissures that are filled with overburden.

Cracking: Principally as a result of weathering of tuff (not shown as cracking on graphic).

Losses: Minor surface loss of tuff just outside posteromedial margin.

Detached/loose tuff: none

Powdering: none

Other: Disruption of tuff in an area inside and outside anterior margin of print, probably caused by root from stump no. 83, which penetrated the tuff just to the north.

#### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout print and outside medial and posterior margins.

Embedding: Embedding of particles in weathered areas.

<u>Silicone</u>: Traces of silicone inside print, particularly noticeable around decayed tree stump near the center of print; also numerous traces outside print.

Excavation tool marks: none

Inventory number on tuff: 1979 label ("1-30") visible on tuff surface.

Other: none

Root damage: Stump of an acacia tree (inv. no. 157), cut and killed in 1979, had decayed and left a bark-lined void in the bottom of the print.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

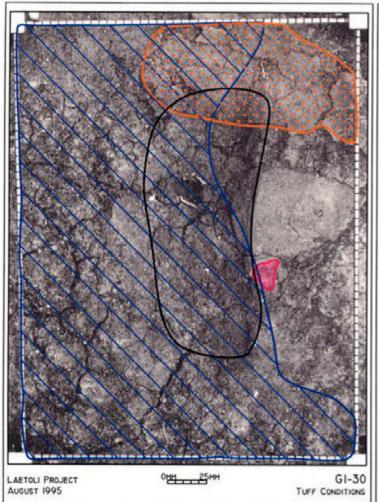
Reattachment: none

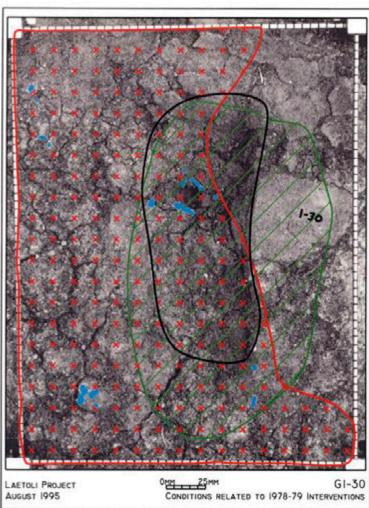
Root treatment: Bark of decayed stump removed.

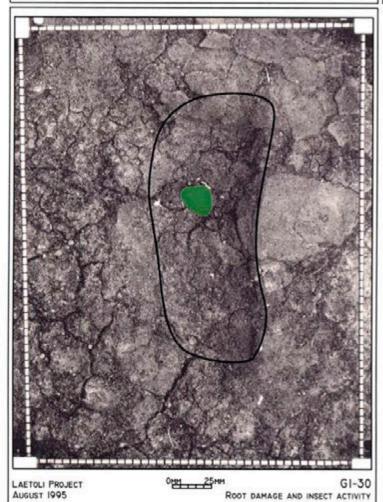
Other: none

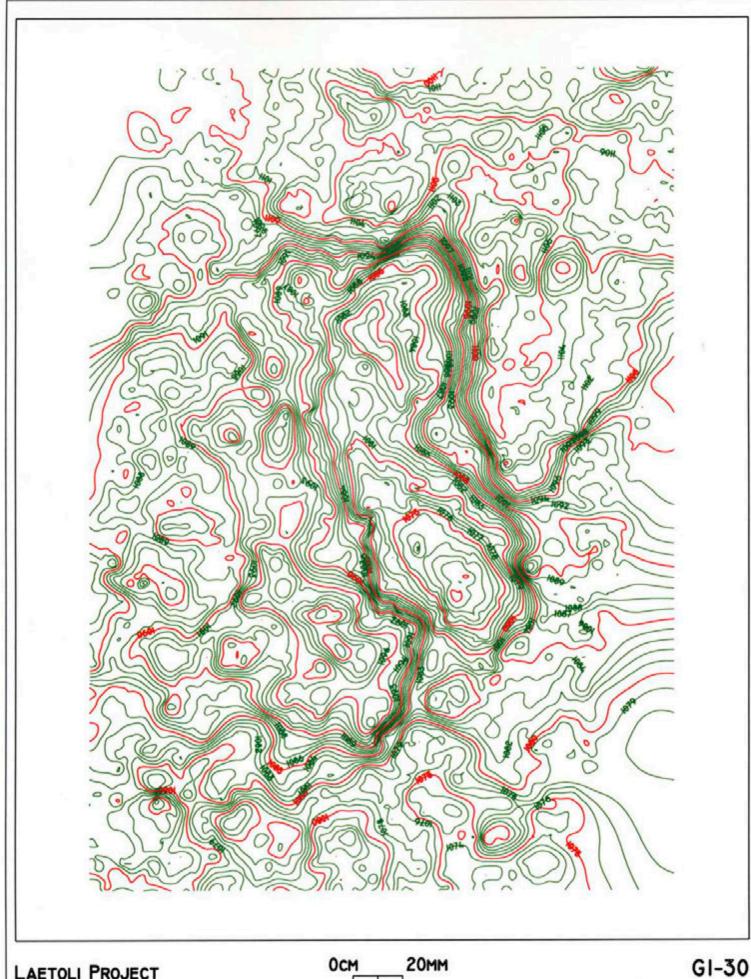
#### Comparison with 1978-79 Cast/Photograph

Cast was made prior to complete excavation of the print and therefore is of limited value for comparison. Comparison with photos showed weathering had progressed since 1979; the freshly cut tree stump seen in the 1979 photos had decayed, and a second cut stump that can be seen approximately 9cm south of the heel margin had also disintegrated by 1995 (not inventoried in 1995). Photos taken before completion of excavation in 1979 show extensive network of rootlets throughout tuff.









CONTOUR MAP

# Condition Record

#### Location

Southern sector of trackway, trench 2.

#### Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995.

# 1978-1979 Description

Right footprint, rather better preserved than 28-30 but also cracked by roots.

#### 1995 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: Moderate weathering in the posteromedial portion of print and extending outside margin. The rest of the tuff inside print margins and immediately surrounding print was calcite cemented, but fractured, tuff. Beyond the fractured tuff was severely weathered tuff. This print is located in the weathered strip of tuff in the southern trackway sector, characterized by patterned cracking with deep fissures that are filled with overburden.

Cracking: Cracking associated principally with weathering of tuff (not shown on graphic).

Losses: none

Detached/loose tuff: none

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout print and surrounding tuff.

Embedding: Moderate to severe embedding of fine particles in weathered areas, mainly outside margins of print, and adhered to Bedacryl layer.

Silicone: Traces of silicone outside posterior margins of print.

Excavation tool marks: none

Inventory number on tuff: 1979 label ("1-31") visible on tuff surface.

Other: none

Root damage: Numerous fine rootlets and one small root from the shallow overburden penetrated the weathered tuff surrounding print and cracks within print.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

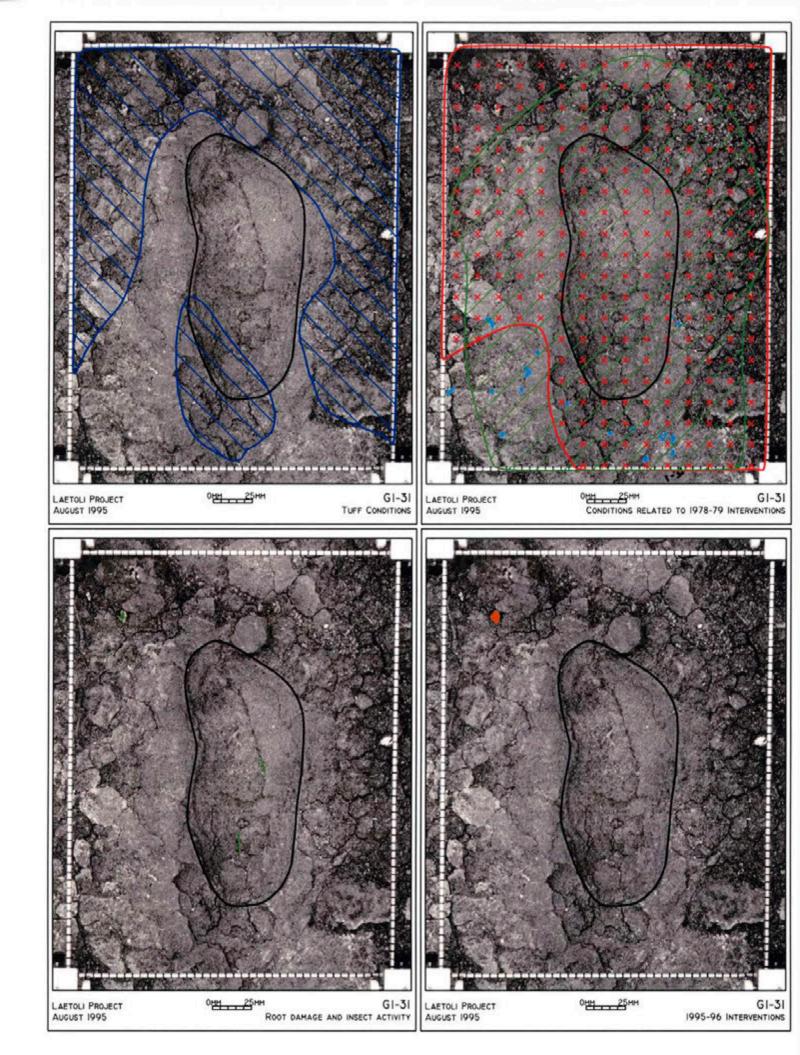
Reattachment: none

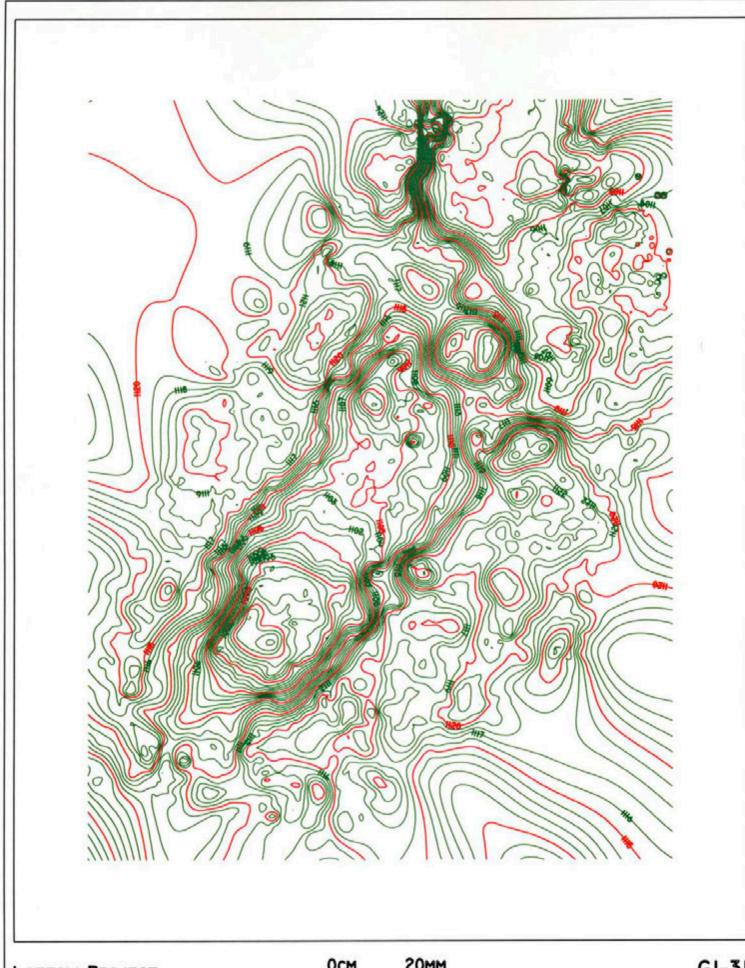
Root treatment: Roots and rootlets were removed where possible or cut.

Other: none

## Comparison with 1978-79 Cast/Photograph

The cast was made prior to complete excavation of print and therefore is of limited value for comparison. Comparison with the 1979 photos showed some additional weathering along the medial margin and of the tuff surrounding the print. 1979 photos taken prior to final excavation show an extensive network of rootlets throughout the tuff.





0cm\_\_\_\_20mm

GI-31 CONTOUR MAP

# Condition Record

## Location

Southern sector of trackway, trench 2.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995.

#### 1978-1979 Description

Heel print only on uplifted fault block, probably of a left foot.

## 1995 Condition

General condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Advanced weathering in an area of fractured, calcite-cemented tuff; weathering was particularly severe around stump no. 21. This print is located in the weathered zone of the southern sector, characterized by patterned cracking and deep fissures filled with overburden. Cracking: Extensive cracking associated with weathering (not shown on graphic).

Losses: none

Detached/loose: none

Powdering: none

Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Severe embedding of particles throughout weathered tuff.

Silicone: Traces of silicone on tuff.

Excavation tool marks: none

Inventory number on tuff: 1979 label ("1-32") visible on tuff surface.

Other: none

Root damage: Stump of acacia tree no. 21 penetrated tuff outside anterior portion of print; an adventitious root of stump no. 21 penetrated tuff anterior to heel portion.

#### Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: Tuff surrounding stump no. 21 and its associated root was consolidated with WS-24 at 4% (shown on flyover Polaroid graphic 1995: VIII-2)

Fills: none

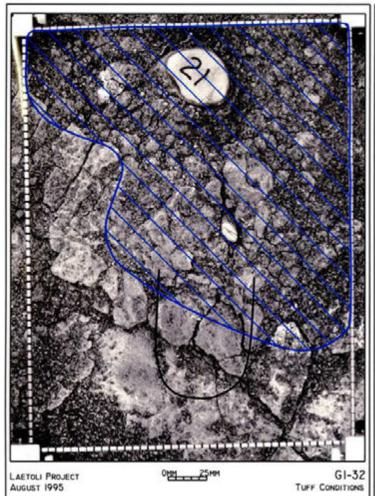
Reattachment: none

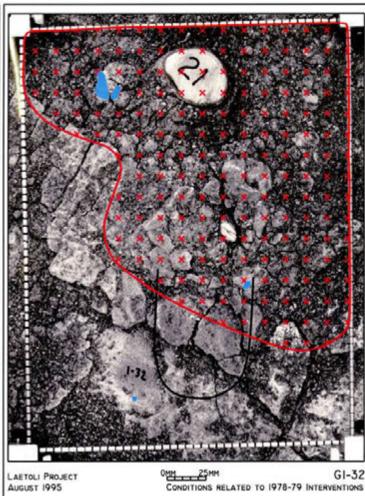
Root treatment: Stump and root cut flush with tuff and treated with PCP (pentachlorophenol) wood preservative to prevent rapid decay of the wood and subsequent collapse of tuff.

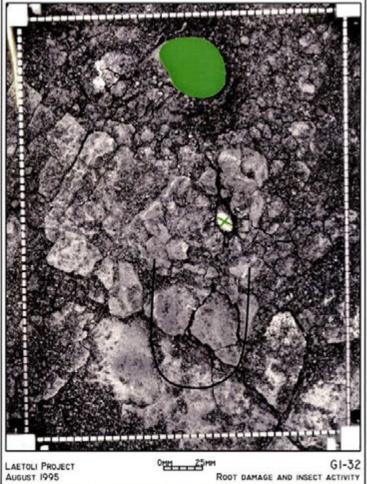
Other: none

#### Comparison with 1978-79 Cast/Photograph

No cast. 1978 photograph (only one photo available) may show footprint before completion of excavation. Fractured and weathered tuff in the area defined as the print is evident in 1978 photo and showed little change in 1995, other than disruption of tuff caused by root of stump no. 21. 1978 photo shows extensive network of small roots from shallow overburden.

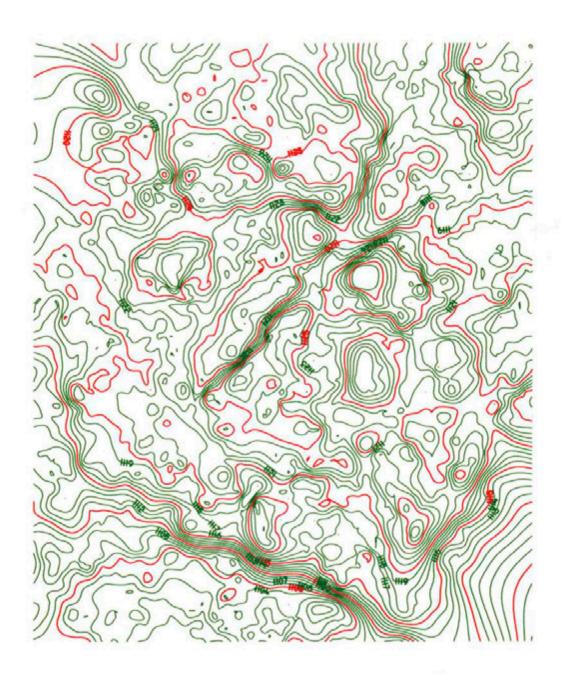












0cm 20mm

GI-32 CONTOUR MAP

Southern sector of trackway, trench 2.

## Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995.

## 1978-1979 Description

Well preserved left footprint

## 1995 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: none

<u>Cracking:</u> Hairline sized cracks on the lateral margin; large crack with calcite vein outside of posteromedial margin.

Losses: Minor surface loss of tuff on medial heel margin.

Detached/loose; none Powdering: none

Other: none

#### Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl found throughout the print and surrounding tuff surface; slightly deteriorated with small patches of loss in the anterior portion of the print, and along medial side of heel impression.

Embedding: Slight embedding of fine particles in Bedacryl layer.

Silicone: Traces of silicone lateral to the print margin.

Excavation tool marks: Excavation tool marks, very faint, concentrated in heel area; tool

identified as dental pick.

Inventory number on tuff: 1979 label ("1-33") visible on tuff surface.

Other: none

Root damage: Small rootlets penetrated the Bedacryl layer, but not the tuff.

Insect activity: none

## 1995 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

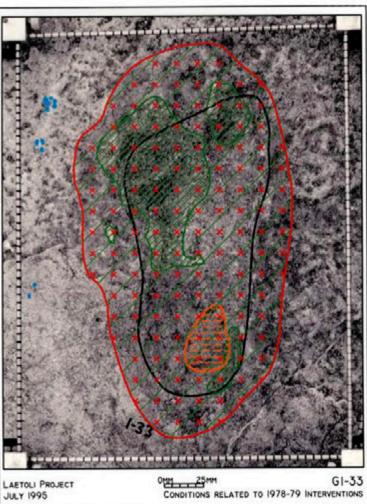
Root treatment: Surface roots removed.

Other: none

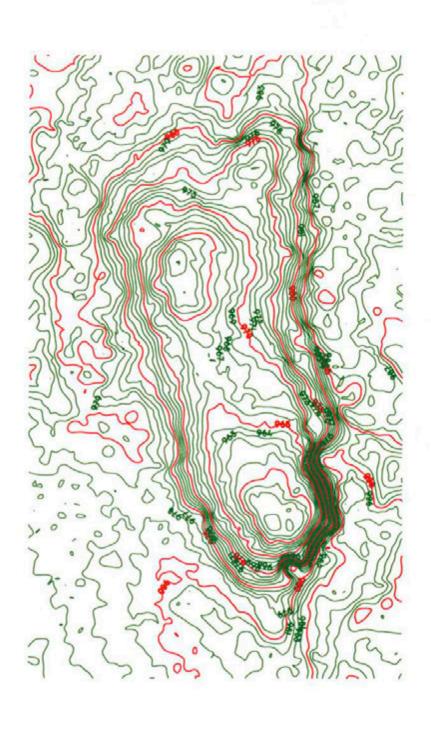
#### Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed loss of resolution of the fine details at the bottom of the print. Tool marks clearly visible in the cast and photos were only faintly visible in the heel portion of the footprint *in situ* due to Bedacryl and embedding.









0см\_\_\_\_20мм

GI-33 CONTOUR MAP

## Location

Southern sector of trackway, trenches 1-2.

## **Excavation and Reburial History**

Excavated and reburied in 1979; re-excavated and reburied in 1995.

# 1978-1979 Description

Well preserved right footprint.

#### 1995 Condition

General condition: Minor alteration: Good

## Tuff conditions:

Weathering: none

Cracking: A few hairline sized cracks on the surface near the center of the print

Losses: none

Detached/loose: none Powdering: none

Other: none

Condition related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout the print and surrounding tuff surface. Deteriorated with minor loss in posterior portion and in small patches in anterior portion.

Embedding: Slight embedding of fine particles in Bedacryl layer (not recorded on graphic).

Silicone: Traces of silicone outside margins of print.

Excavation tool marks: Tools marks visible on floor of the print (not recorded on graphic).

Inventory number on tuff: 1979 label ("1-34") visible on tuff surface.

Other: none

Root damage: Only a few tiny rootlets on surface of tuff.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

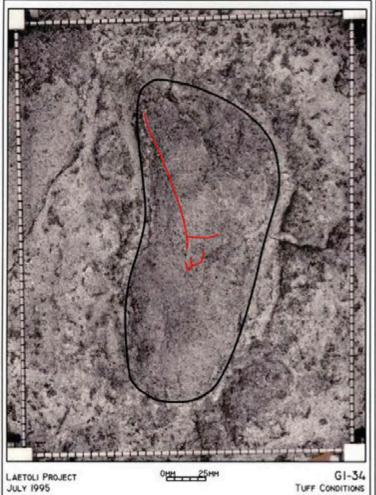
Reattachment: none

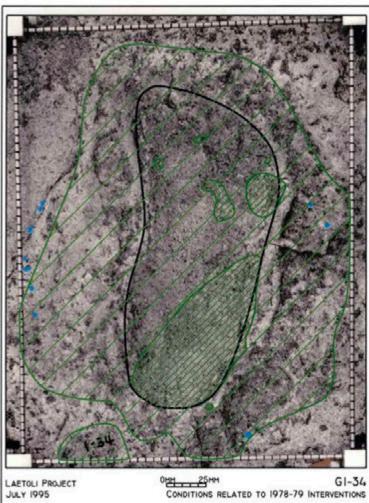
Root treatment: Surface roots removed.

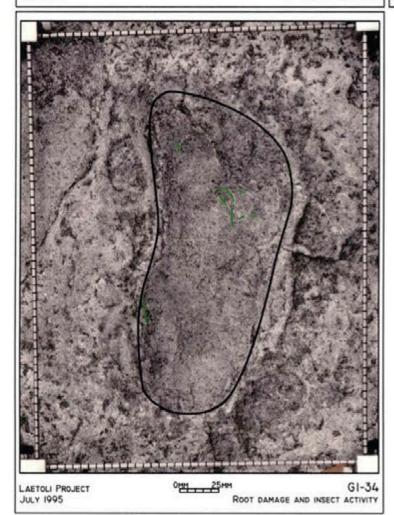
Other: none

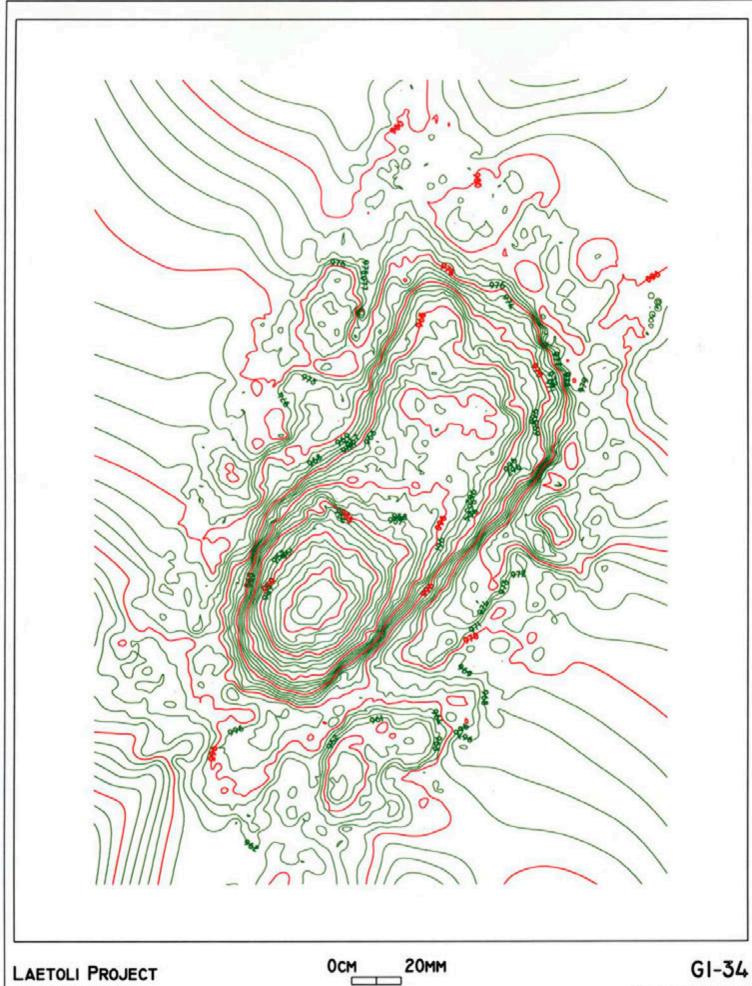
Comparison with 1978-79 Cast/Photograph

Comparison with 1979 cast and photos showed slight loss of resolution of features due to the Bedacryl layer. A crack at the center of the footprint and excavation tool marks were more distinct in the cast and photos than *in situ*.









AUGUST 1996

CONTOUR MAP

Southern sector of trackway, trench 1.

## **Excavation and Reburial History**

Excavated and reburied in 1979; re-excavated and reburied in 1995.

1978-1979 Description

Left footprint, particularly well preserved with clear impressions of toes 3 to 5. They consist of small circular depressions with an average width of 11.5 mm, set close together in a row 36 mm long, lying oblique to the long axis of the footprint.

## 1995 Condition

General condition: Minor alteration: Good

## Tuff conditions:

Weathering: Slight incipient weathering of tuff in print adjacent to lateral margin.

Cracking: Cracks traverse heel and toe areas.

Losses: none

Detached/loose: none

Powdering: none

Other: none

## Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl covered the print surface and the surrounding tuff. The Bedacryl had deteriorated, with minor areas of loss, over most of the print surface, except the area of the great toe and ball, and was cracked near the lateral margin.

Embedding: Minor embedding of fine particles in areas of weathering and deteriorated Bedacryl.

Silicone: none

Excavation tool marks: Excavation tool marks visible on floor of print and especially apparent outside lateral margins of heel and medial side of arch.

Inventory number on tuff: 1979 label ("1-35") visible on tuff surface.

Other: none

<u>Root damage</u>: Rootlets were embedded in the Bedacryl layer in the area of the great toe and along the lateral margin, but did not penetrate the tuff.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

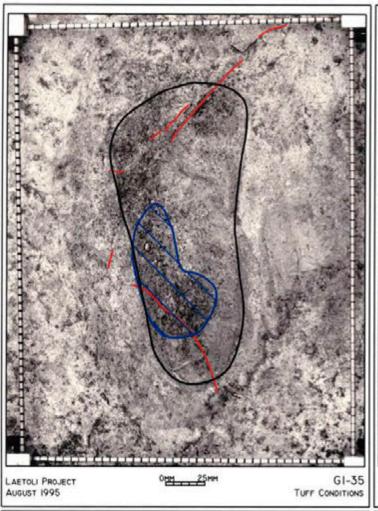
Reattachment: none

Root treatment: Surface roots removed.

Other: A sample of cracked Bedacryl (<2.25mm<sup>2</sup>) was taken back to the GCI for IR analysis.

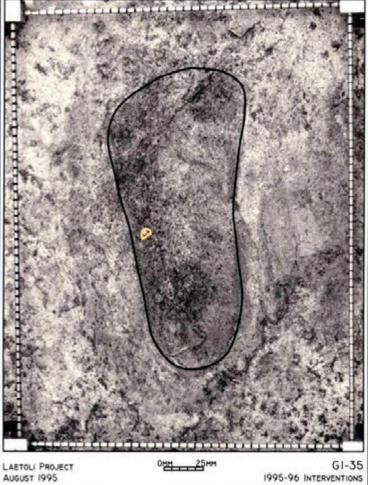
Comparison with 1978-79 Cast/Photograph

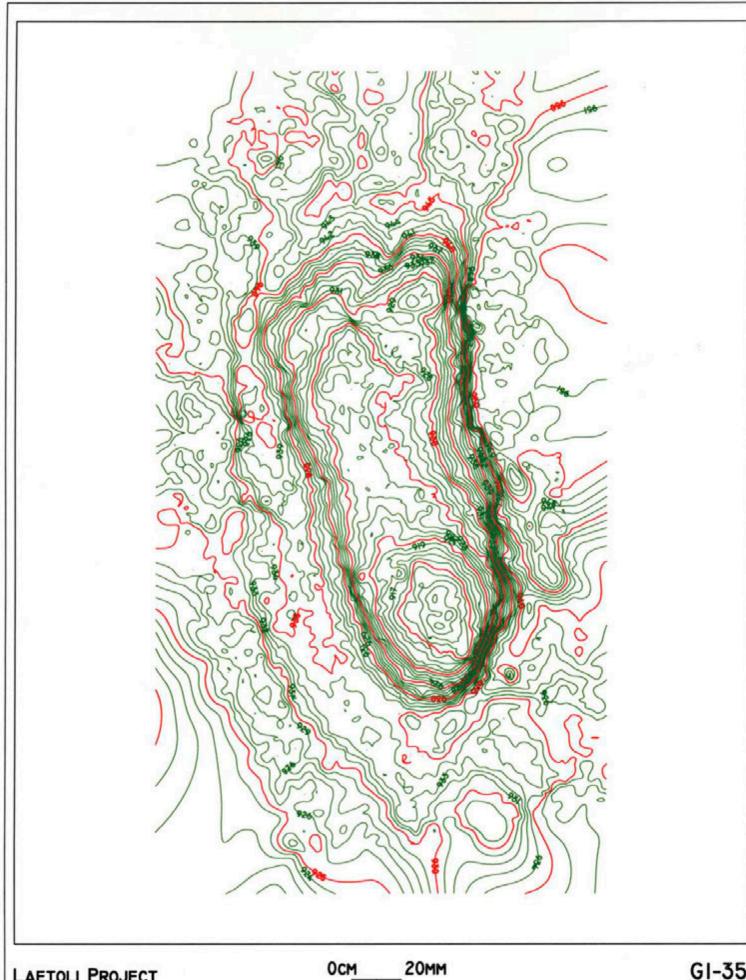
Comparison with the 1979 cast and photos showed slight loss of resolution of features, such as cracks and excavation tool marks, due to Bedacryl coating the print surface. Slight weathering of tuff along lateral margin was not apparent in 1979 photos.











0CM

GI-35 CONTOUR MAP

Southern sector of trackway, trench 1.

## **Excavation and Reburial History**

Excavated and reburied in 1979; re-excavated and reburied in 1995.

## 1978-1979 Description

Well preserved right footprint. The toes have been overprinted subsequently by an indeterminate animal print.

## 1995 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: none

<u>Cracking:</u> Hairline cracks transect heel and are evident on the fossilized termite burrows in anterior portion.

Losses: Minor loss of tuff surface noted outside medial and lateral margins of print.

Detached/loose tuff: none

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout the print and surrounding it; deterioration of Bedacryl in heel area and anterior to arch.

Embedding: Slight embedding of particles in Bedacryl layer on the floor of the print.

Silicone: none

Excavation tool marks: Tool marks visible in the arch and heel portions of print.

Inventory number on tuff: 1979 label ("1-36") visible on tuff surface.

Other: none

Root damage: A few rootlets on the surface, which did not penetrate the Bedacryl layer.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

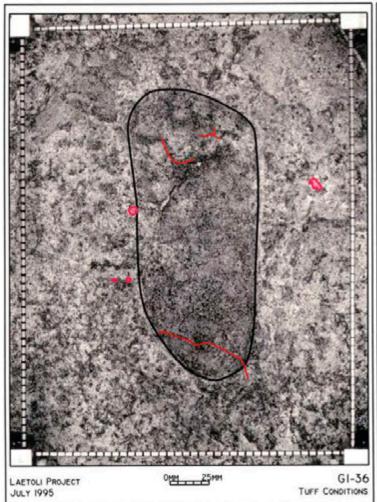
Reattachment: none

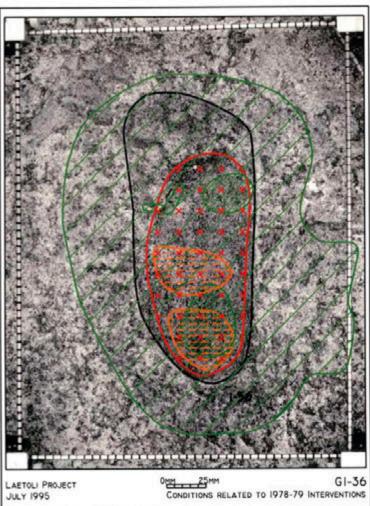
Root treatment: Surface roots removed.

Other: none

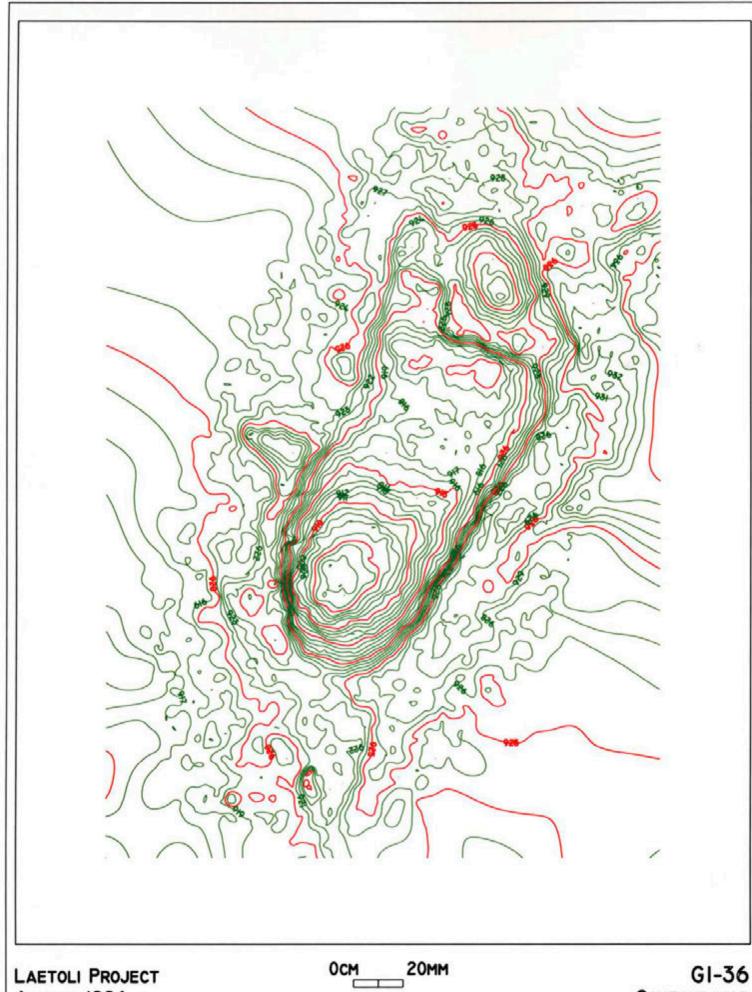
## Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed loss of resolution of features on the floor of the print due to Bedacryl coating. Tool marks clearly visible in the arch and heel portions of the cast and photos were muted in the print in situe, tool marks in the anterior portion of the print were not visible in situe. The transverse crack in the heel was visible in both the cast and the footprint in situe.









GI-36 CONTOUR MAP

Southern sector of trackway, trench 1.

## Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995.

#### 1978-1979 Description

Well preserved complete left footprint.

#### 1995 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: Slight weathering of tuff on medial margin near arch; and outside of the print margins.

Cracking: none

Losses: none

Detached/loose: none

Powdering: none

Other: none

## Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl covered surface of print and extended outside medial margin in area of the arch. Bedacryl deteriorated slightly in the heel, with minor losses, and toe and ball areas. The layer appears to have been thickly applied.

Embedding: Slight embedding of particles in Bedacryl layer (not shown on graphic).

Silicone: Very minor traces of silicone outside print.

Excavation tool marks: Excavation tool marks were evident over much of the floor of the print.

Inventory number on tuff: 1979 label ("1-37") barely visible on tuff surface.

Other: none

Root damage: Rootlets primarily on the surface; a few penetrated into the Bedacryl layer; one root penetrated tuff near center of print.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

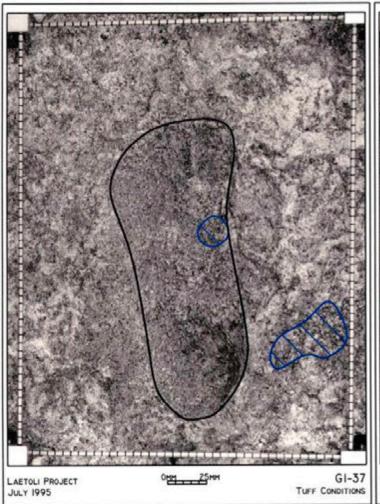
Reattachment: none

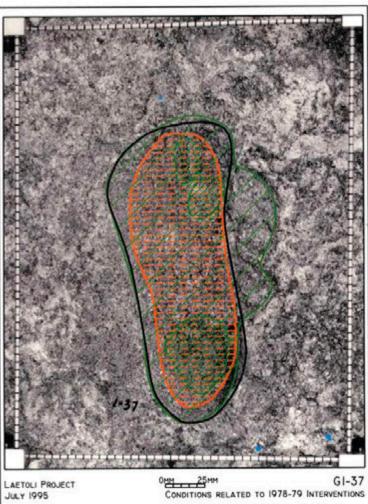
Root treatment: Surface roots removed.

Other: none

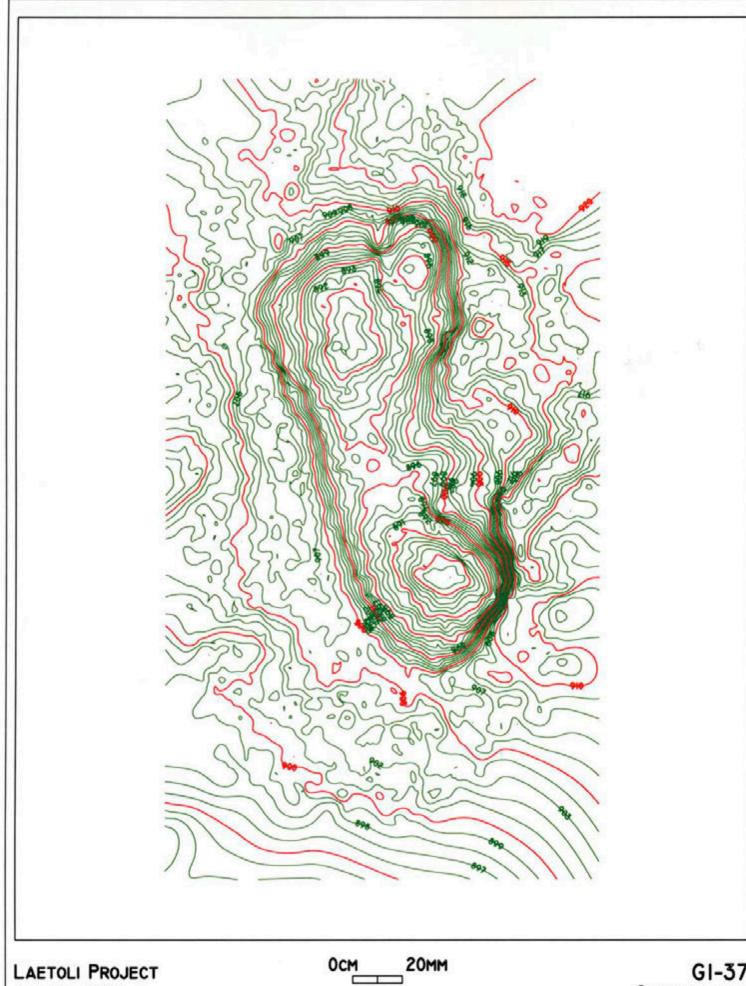
## Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed slight loss of resolution of fine details on the surface due to Bedacryl and particles embedded in the Bedacryl layer. Excavation tool marks were less visible in situ.









GI-37 CONTOUR MAP

## Location

Southern sector of trackway, trench 1.

## **Excavation and Reburial History**

Excavated and reburied in 1979; re-excavated and reburied in 1995.

## 1978-1979 Description

Right footprint, incomplete owing to the heel having been truncated by a small fault.

#### 1995 Condition

General condition: Minor alteration: Good

## Tuff conditions:

Weathering: Slight weathering of tuff at the point where the fault intersects the print.

Cracking: Fine surficial cracks at the fault intersection (not visible on graphic).

Losses: Minor abrasion of tuff surface outside posterior print margin; appears to be an old loss.

Detached/loose tuff: none

Powdering: none Other: none

#### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl covered the print and surrounding tuff surface. Patches of deteriorated

Bedacryl on floor of print.

Embedding: Severe embedding of fine particles in the area of weathered tuff and along medial margin; slight embedding on the remainder of the print surface.

Silicone: Traces of silicone outside print margin.

Excavation tool marks: Tool marks visible outside medial margin near fault line.

Inventory number on tuff: 1979 label ("1-38") visible on tuff surface.

Other: none

Root damage: Root penetrated the wall of the fault where it intersected the print, but did not go directly into the floor of print. Rootlets on surface of print.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Surface roots removed.

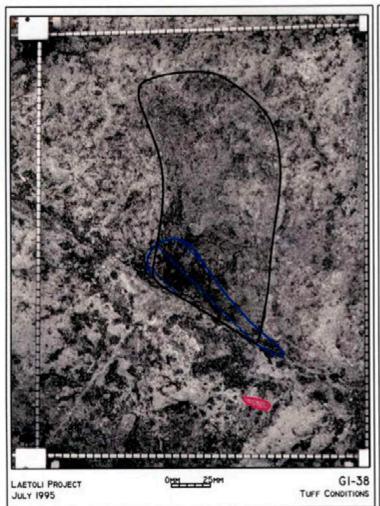
Other: none

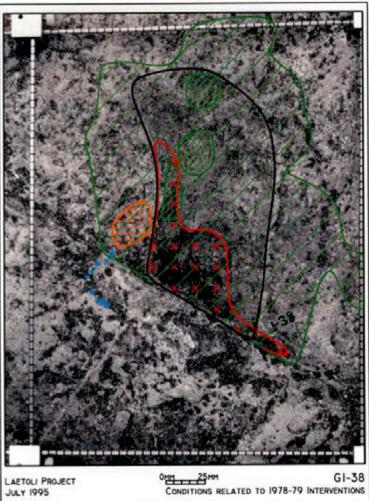
# Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed distinct loss of resolution of features on the print surface due to Bedacryl and embedding of fine particles covering the surface of the print. Tool marks visible in the cast on the floor of the print were obscured *in situ*.

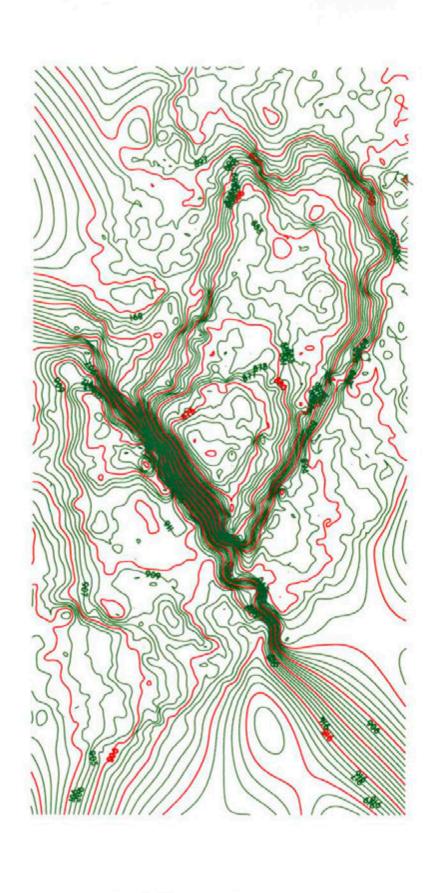
# Notes

The 1978 reburial fill was wet when print was re-excavated in 1995.









0cm\_\_\_\_20mm

Southern sector of trackway, trench 1.

## Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995.

#### 1978-1979 Description

Complete left footprint. The big toe has left a small unusually circular depression 29 mm long and 25 mm wide instead of the rather broad, oblong impressions usually made by the big toe in the G-1 trail. There is also a small ridge behind toes 2-5 where the ash has been pushed up against the ball of the foot. A print of the hipparion foal has impinged marginally on the anterior impressions of toes 2-5.

#### 1995 Condition

General condition: Minor alteration: Good

#### Tuff conditions:

Weathering: Slight weathering of the tuff along the lateral margin of print.

Cracking: none

Losses: Minor loss of tuff outside margin of great toe and lateral margin of print.

Detached/loose: none Powdering: none Other: none

## Condition related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl covered the surface of the print and surrounding tuff. It was slightly deteriorated along the lateral print margin with numerous hairline cracks in the Bedacryl layer, and outside the anterior margin.

Embedding: Slight embedding noted in Bedacryl layer (not shown on graphic)

Silicone: Minor traces of silicone outside print margins.

Excavation tool marks: none

Inventory number on tuff: 1979 label ("1-39") visible on tuff surface.

Other: none

Root damage: Rootlets, less than 1mm diameter, weaved in an out of the Bedacryl layer and a few penetrated the tuff along the lateral side, forming a root mat in the lateral heel portion.

Insect activity: none

#### 1995 Interventions

Consolidation/stabilization: none

Fills: none

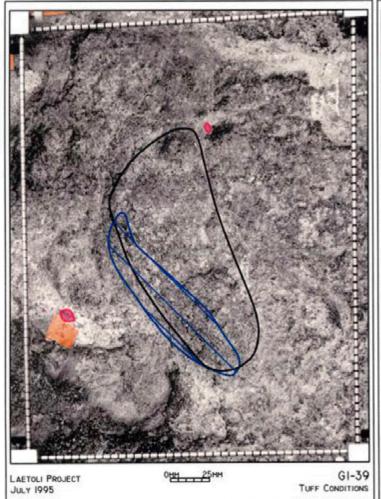
Reattachment: none

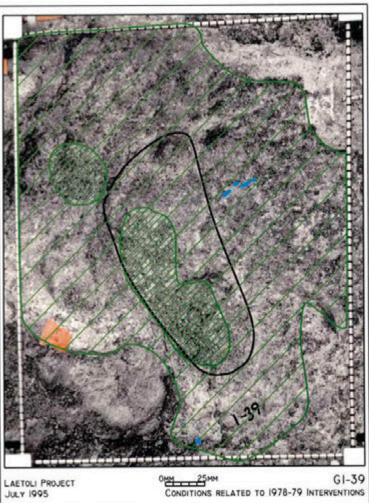
Root treatment: Surface roots removed.

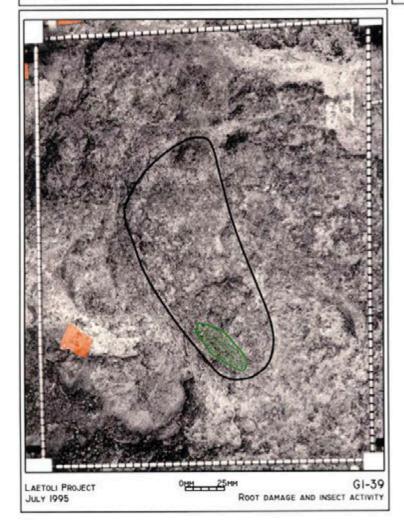
Other: none

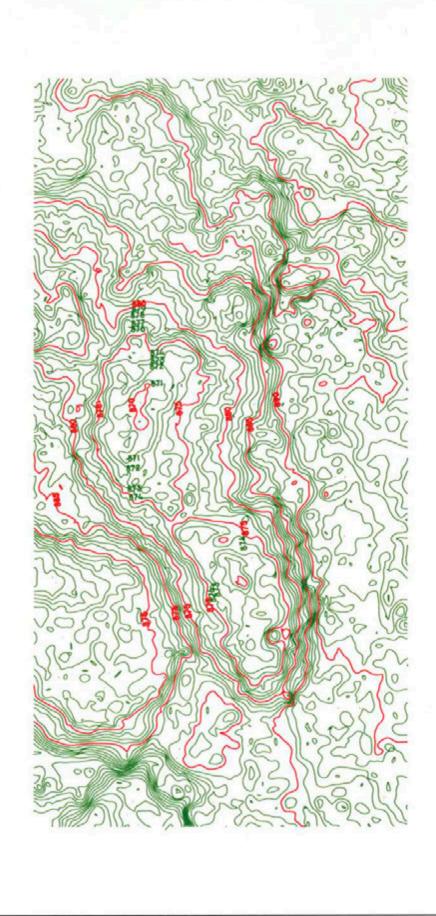
## Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed slight loss of resolution of surface features. Slight weathering on lateral margin was already visible in 1979 photos.









0CM\_\_\_\_\_20MM

GI-39 CONTOUR MAP G2/3 Footprint List

PRINT	TRACKWAY SECTOR	GENERAL CONDITION OF PRINT	GRAPHIC CONDITION RECORD	PHOTO- GRAMMETRIC CONTOUR MAP	CAST
G2/3-1	North	Significant alteration	Flyover Polaroid	No	Yes
G2/3-2	North	Moderate alteration	Individual Polaroid	Yes	Yes
G2/3-3	North	Moderate alteration	Flyover Polaroid	Yes	Yes
G2/3-4	North	Moderate alteration	Flyover Polaroid	No	No
G2/3-5	North	Moderate alteration	Polaroid with G1-6, 7, and 8	Yes	No
G2/3-6	North	Moderate alteration	Individual Polaroid	Yes	No
G2/3-7	North	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-8	North	Moderate alteration	Individual Polaroid	Yes	No
G2/3-9	North	Moderate alteration	Individual Polaroid	Yes	Yes
G2/3-10	North	Moderate alteration	Individual Polaroid	Yes	No
G2/3-11	North	Moderate alteration	Flyover Polaroid	No	No
G2/3-12	North	Moderate alteration	Flyover Polaroid	No	No
G2/3-13	North	Moderate alteration	Flyover Polaroid	No	No
G2/3-14	North	Moderate alteration	Flyover Polaroid	No	No
G2/3-15	Middle	Significant alteration	Individual Polaroid	No	No
G2/3-16	Middle	Moderate alteration	Individual Polaroid	No	No
G2/3-17	Middle	Moderate alteration	Individual Polaroid	Yes	No
G2/3-18	South	Moderate alteration	Individual Polaroid	Yes	Yes

G2/3-19	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-20	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-21	South	Significant alteration	Individual Polaroid	Yes	Yes
G2/3-22	South	Significant alteration	Individual Polaroid	Yes	Yes
G2/3-23	South	Limited assessment	[Individual Polaroid; field record only]	Yes	No
G2/3-24	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-25	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-26	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-27	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-28	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-29	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-30	South	Minor alteration	Individual Polaroid	Yes	Yes
G2/3-31	South	Moderate alteration	Individual Polaroid	Yes	Yes

# **Laetoli Condition and Treatment Legend**

Approximate footprint outline: (layer 1) Black **Tuff conditions** Conditions related to 1978-79 interventions Weathering: (layer 2) Bedacryl conditions: (layer 8) Blue Bedacryl Cracking: (layer 3) Deteriorated or missing Bedacryl Red Green Losses: (layer 4) Embedding: (layer 9) × × Red Magenta Detached/ loose tuff: (layer 5) Silicone: (layer 10) Cyan Cyan Powdering: (layer 6) Excavation tool marks: (layer 11) Yellow Orange Other tuff conditions: (laver 7) Inventory number on tuff: (layer 12) 1-36 Black Void Other 1978-79 interventions: (layer 13) Disruption Orange Plastic fragment Yellow staining Yellow Root damage and insect activity 1995-96 Interventions Roots: (layer 14) Consolidation/stabilization: (layer 16) Surface roots Fills: (layer 17) Root mat Magenta Remnant stump Reattachment: (layer 18) Cvan Penetration point Green Root treatment: (layer 19) Cut root or stump Root impression Magenta Subterranean root removed Subterranean root Brown Yellow Insect activity: (layer 15) Other interventions: (layer 20) Non-specific insect activity Bedacryl removed Cut-worm pupal cases Insect trail removed Orange Sample taken Yellow

Northern sector of trackway, trench 7.

**Excavation and Reburial History** 

Partially exposed through natural weathering prior to 1978; excavated and reburied in 1978; exposed through erosion after 1979; eroded areas re-excavated and reburied in 1996.

1978-1979 Description

Large left footprint. The big toe has left a distinct impression and there is a scuff mark in front of the other toes. The rim of the heel impression is sharply defined and must be assumed to be of G-3 in view of the great length of the print (280 mm) and the fact that in better preserved prints where G-2 and G-3 can be distinguished G-3 has always stepped on and obliterated the heel prints of G-2.

1996 Condition

General Condition: Significant alteration: Print lost to erosion. No individual graphic condition record. Condition of tuff in area of G2/3-1 covered on Polaroid flyover XIV-2, 1996.

1996 Interventions

Interventions in area of G2/3-1 covered in Polaroid flyover XIV-2, 1996. Loose and dislodged fragments in the area of the prints were stabilized with Acrysol WS-24 at 25%.

Comparison with 1978-79 Cast/Photograph

Comparison with the 1978 cast and photos showed the prints and the surrounding tuff anterior to the prints to be eroded. The only resemblance to the 1978 cast was the rim of a heel and the tuff posterior to the prints.

Notes

See 1996-1998 Report on the Laetoli Project, pp. 26-27; 53-54 for contextual information on the loss of prints G1-1 and G2/3-1.

Northern sector of trackway, trench 7.

## **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

1978-1979 Description

Large right footprint. The anterior part is poorly defined and the surface of the tuff has been eroded except at the rear, where the heel print is sharp and clear.

#### 1995 Condition

General Condition: Moderate alteration: Fair

Tuff conditions:

Weathering: Moderate weathering of well-calcified tuff on anterior and posterior portions of the prints and in tuff surrounding prints. Weathering more extensive on exterior than interior.

Cracking: Minor cracks: one along the lateral side of the prints appeared to be new (does not appear in cast); another small crack ran from the medial side of the center of prints to the anterior portion, with a partially missing calcite vein.

Losses: Small area of loss outside medial margin of the prints, approximately 0.5cm<sup>2</sup>.

Detached/loose tuff: Two small patches (<1cm²) in heel and one beyond the medial margin.

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Patches of deeply embedded fines in the posterior portion, and also rather extensively on the exterior in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Network of fine rootlets on surface and penetrating weathered tuff (not shown on graphic). One root approximately 2mm in diameter penetrated the tuff in the anterior portion. A 3mm diameter root penetrated tuff numerous times just beyond the posterior margin.

Insect activity:

Non-specific: One small ant hole outside the anterior margin of prints.

Cut-worm pupal cases: Pupal casing on tuff outside the anterior margin of prints.

1996 Interventions

Consolidation/stabilization: Loose fragments in heel were stabilized with Acrysol WS-24 at 25%. Fills: Undercut fragment (1.5cm²) of tuff exterior to medial margin of the prints was filled with sieved soil and Acrysol WS-24 at 30%.

Reattachment: Detached fragment in heel (1.5cm²) was reattached with Paraloid B-72. 1.0cm² fragment exterior to medial margin was also reattached.

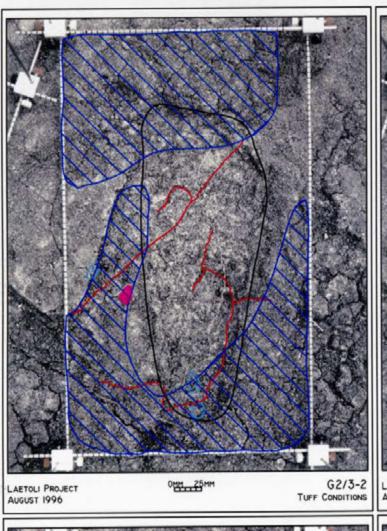
Root treatment: Surface rootlets removed. 3mm diameter root just beyond the posterior rim was cut and subterranean portions were left in situ.

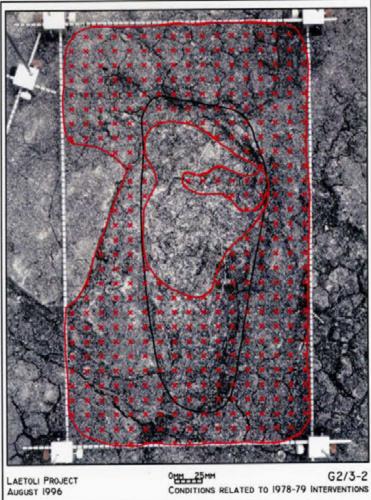
Comparison with 1978-79 Cast/Photograph

Comparison with the 1978 cast and photos showed some loss of resolution of fine detail and considerable increase in weathering of tuff, particularly in the area surrounding the prints. "Gray infill" patch seen in photographs was not visible in the cast or *insite*, field notes from Tim White state that Ron Clarke removed this patch.

Notes

Fill excavated in 1996 ranged from highly consolidated in the posterior region to loose fill in the anterior portion. The consolidated fill tended to detach in clumps. In the posterior portion, at the tuff interface, fine particles of the overburden were deeply embedded.

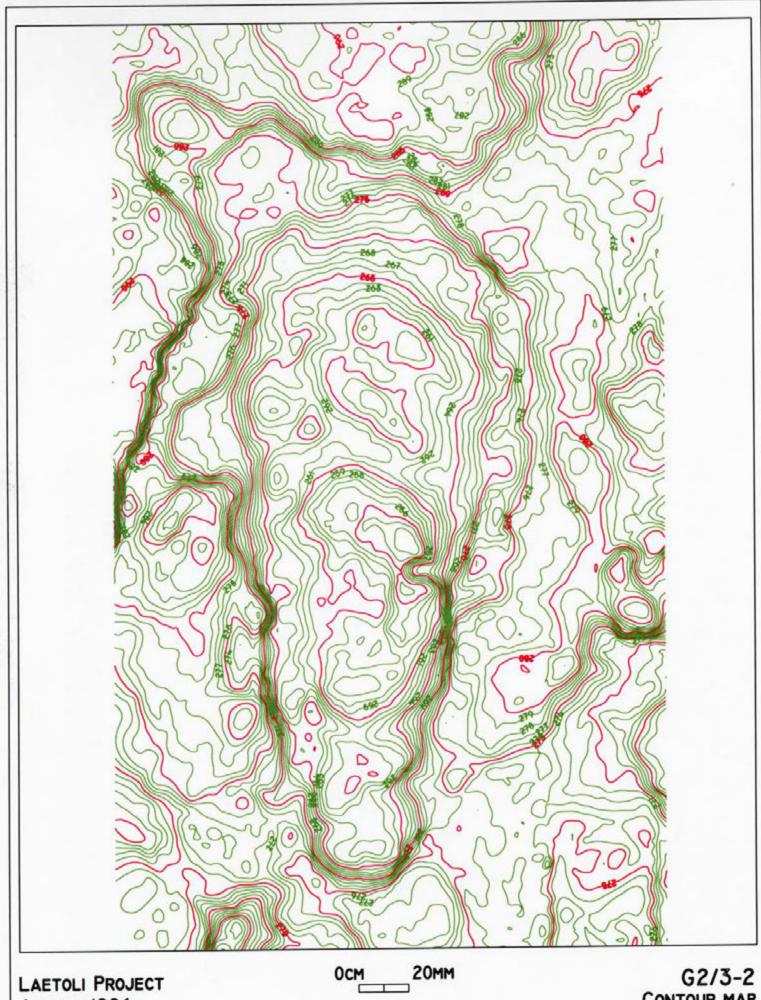




LAETOLI PROJECT AUGUST 1996

G2/3-2 ROOT DAMAGE AND INSECT ACTIVITY

0<u>HH 25</u>MM G2/3-2 1995-96 INTERVENTIONS



CONTOUR MAP

#### Location

Northern sector of trackway, trench 7.

## **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

A depression in the lower part of the Footprint Tuff, impossible to measure, but its position in the trail indicates that it is of a left foot.

#### 1995 Condition

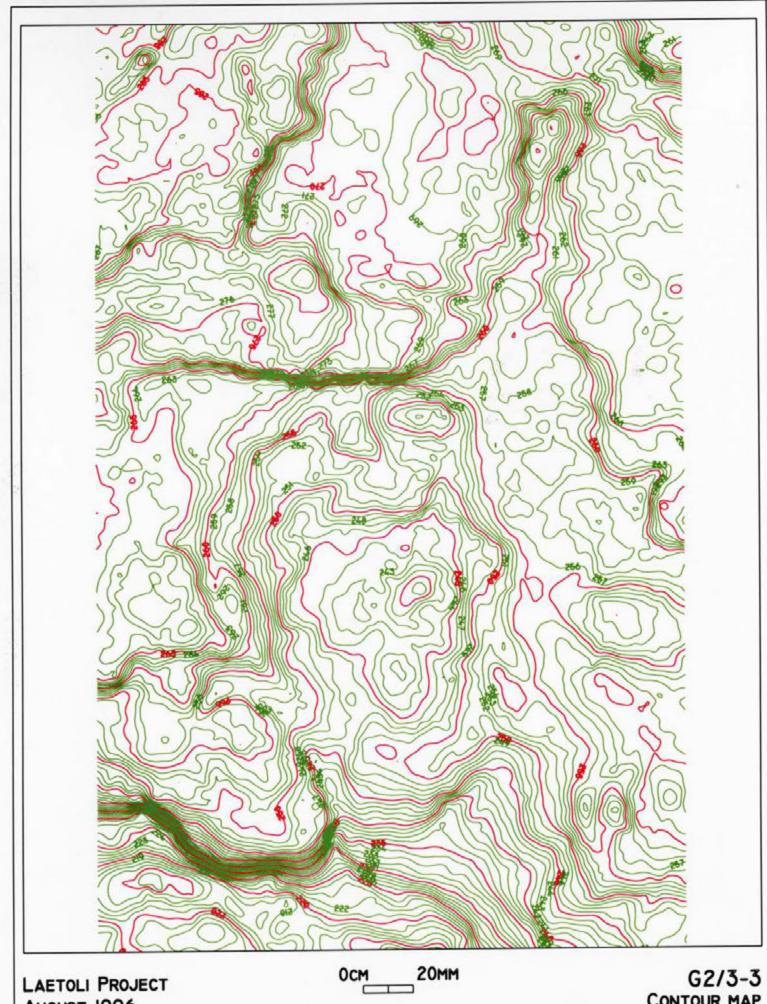
General Condition: Moderate alteration: Fair. Based on condition of the tuff in general area. No individual graphic condition record. Condition of tuff in area of G2/3-3 is recorded on Polaroid flyover XIII-2, 1996. Conditions included moderate weathering of tuff throughout prints; detached fragment (1.0cm²) in anterior region from root penetration and loose tuff in posterior portion; embedding of particles; and penetration of anterior portion by 7.3mm diameter root and of tuff outside margins by other roots.

#### 1996 Interventions

Interventions in the area of G2/3-3 recorded on Polaroid flyover XIII-2, 1996. Interventions included consolidation of loose areas with Acrysol WS-24 and reattachment of detached fragment in anterior portion with Paraloid B-72; and removal of surface roots.

## Comparison with 1978-79 Cast/Photograph

Comparison with the 1978 cast and photos showed a loss of resolution of the prints' surface and margins due to weathering and embedded fines. A calcite vein running through the medial margin was clearly visible in the cast and *in site*, a crack running diagonally through the prints appeared more irregular in shape as it cut through the heel. A patch of tuff posterior to the margins of the prints (clearly visible in the photographs) was not present *in site*, the loss (or removal) occurred in 1978 since particles from the overburden were embedded in the extant tuff surface.



CONTOUR MAP

## Location

Northern sector of trackway, trench 7.

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

A similar depression [as G2/3-3], retaining even less morphology than 2/3-3, probably of a right foot, from its position in the trail.

## 1995 Condition

General Condition: Moderate alteration: Fair. Based on condition of the tuff in general area. No individual graphic condition record. Condition of tuff in area of G2/3-4 is recorded on Polaroid flyover XIII-2, 1996. Conditions included moderate weathering throughout prints; slight powdering of tuff surface; heavy embedding of particles; and rootlets on surface.

## 1996 Interventions

No interventions recorded in area of prints.

# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with the 1978 photos showed a slight loss of resolution of the prints' surface and the surrounding tuff due to weathering and embedded fines.

#### Location

Northern sector of trackway, trench 6.

# **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

An amorphous depression, the position in the trail indicates that it is of a left foot.

## 1995 Condition

General Condition: Moderate alteration: Fair

## Tuff conditions:

Weathering: Moderate weathering of tuff, especially in the posterior portion and extending beyond margin of print.

Cracking: Crack traverses axis of print, extending outside anterior margin to G1-6.

Losses: none

Detached/loose tuff: Loose tuff outside posterior margin, extends west to G1-7.

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Embedding of fine particles in weathered areas.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: none.

Insect activity: none.

#### 1996 Interventions

Consolidation/stabilization: Loose tuff was stabilized with Acrysol WS-24 at 25%.

Fills: none

Reattachment: none

Root treatment: Surface rootlets were removed.

Other: none

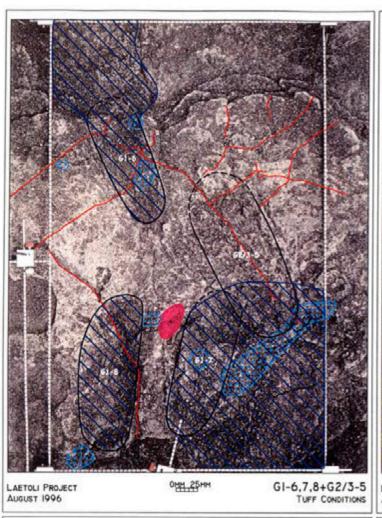
# Comparison with 1978-79 Cast/Photograph

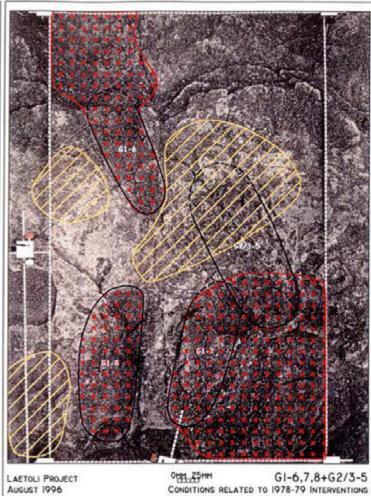
No cast. Comparison with the 1978 photos showed only a slight loss of resolution of features on the prints' surface and the surrounding tuff due to increased weathering and embedded fines.

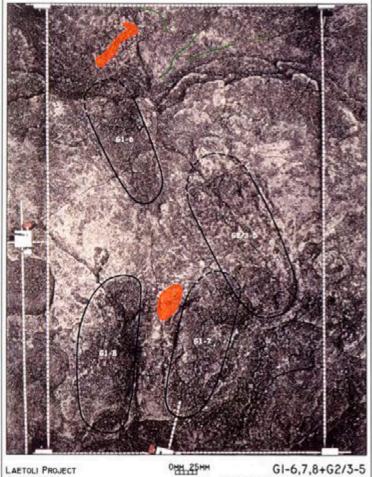
#### Notes

Graphic condition record includes prints G1-6, 7, 8 & G2/3-5 and is printed at a different scale than the other Polaroids with single prints. See other written condition records for description of conditions in and around those prints.

Print G2/3-5 is labeled G1-7 on the plan of the trackway published in Michael Day, Guide to Fossil Man. 1986, 184, Fig. 63 (see 1996-1998 Report on the Laetoli Project, p. 13, for confusion in numbering of these prints).





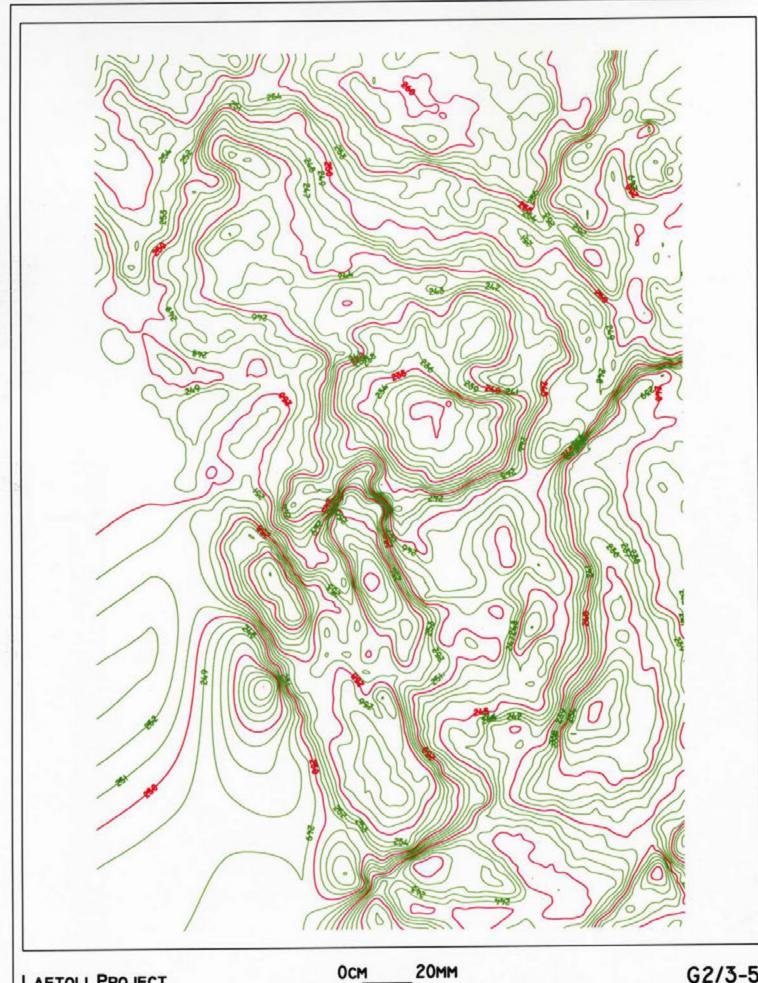


AUGUST 1996

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0мн 25мм GI-6,7,8+G2/3-5 ROOT DAMAGE AND INSECT ACTIVITY

G1-6,7,8+G2/3-5 1995-96 INTERVENTIONS



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G2/3-5 CONTOUR MAP

#### Location

Northern sector of trackway, trench 6.

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

## 1978-1979 Description

A depression in the lower part of the tuff. All the upper surface has been lost through erosion, but the position in the trail indicates that it is of a right foot.

## 1995 Condition

General Condition: Moderate alteration: Fair

## Tuff conditions:

Weathering: Severely weathered on interior of the prints, except on an island of tuff (with remnants of L14) in the center, and outside anterior and lateral margins.

Cracking: none

Losses: none

Detached/loose tuff: Discrete patches of loose tuff associated with weathering in posterior portion, and outside anterolateral margin. Two small fragments in posterior half, each averaging 0.50cm<sup>2</sup>, were detached.

Powdering: none

Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl stringers observed in raised central portion (anterior to island of L14 tuff).

Embedding: Deeply embedded particles at bottom of the prints and in weathered areas.

Silicone: none

Excavation tool marks: none

Inventory number on tuff: none

Other: Yellow resinous material (identified as cellulose nitrate; see <u>Interventions: Other</u>) in raised central portion (island of L14 tuff).

Root damage: Numerous surface rootlets but no significant root penetration on interior of prints. Single root, 3-4mm diameter, penetrated the tuff beyond the lateral margin. Root had nearly disintegrated, leaving a distinct impression in the surface.

## Insect activity:

<u>Cut-worm pupal cases</u>: Six small cut-worm casings, all located outside medial and posterolateral margins.

## 1996 Interventions

Consolidation/stabilization: Loose fragments of weathered tuff stabilized with Acrysol WS-24 at 25%.

Fills: none

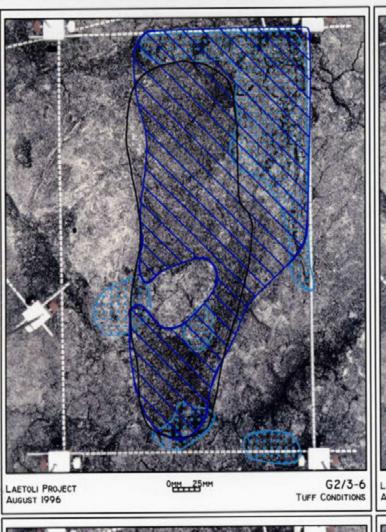
Reattachment: Two detached fragments in posterior half were reattached with Paraloid B-72.

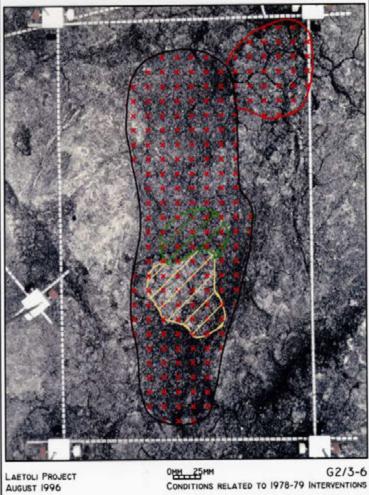
Root treatment: Surface rootlets removed.

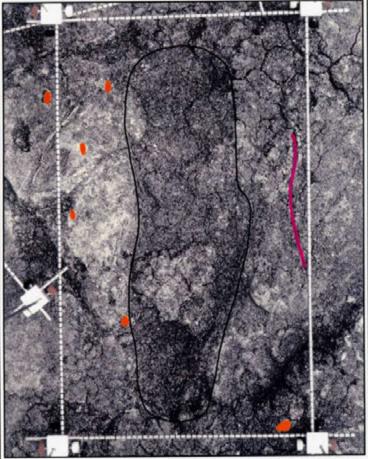
Other: Sample of yellow resinous material taken for analysis (identified as cellulose nitrate; location not shown on graphic); see 1996-1998 Report on the Laetoli Project, p. 39 for discussion of analysis.

# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with the 1978 photos showed a slight loss of resolution of features on the prints' surface, particularly in the anterior portion; increased weathering of the tuff; and embedding of fine particles.



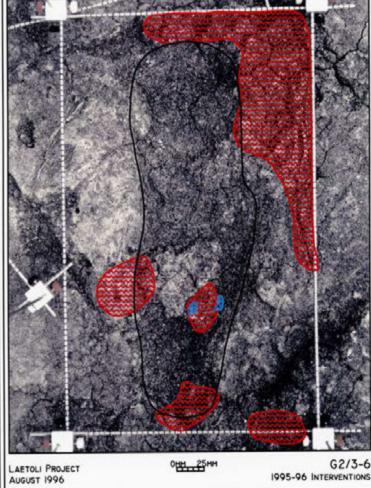




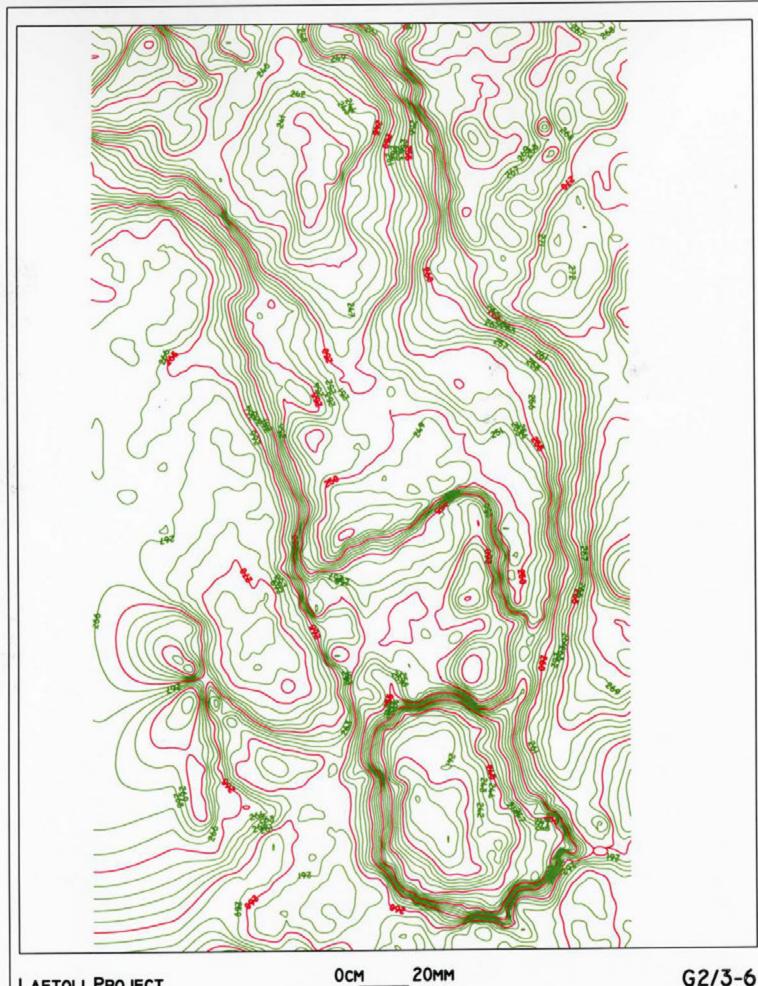
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LAETOLI PROJECT AUGUST 1996

G2/3-6 ROOT DAMAGE AND INSECT ACTIVITY



G2/3-6 1995-96 INTERVENTIONS



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G2/3-6 CONTOUR MAP

### Location

Northern sector of trackway, trench 6.

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

### 1978-1979 Description

Left double prints, the best preserved of the G-2/3 prints in the northern sector. The rim is fragile and had crumbled off in parts but the outline is clear and the impression of the G-3 big toe can be seen distinctly within the larger G-2 print.

#### 1995 Condition

General Condition: Minor alteration: Good

### Tuff conditions:

Weathering: Slight weathering occurred primarily outside the prints beyond the posterior and anteromedial margins.

Cracking: Two cracks associated with missing calcite vein in central portion.

Losses: Small loss (0.5cm²) just beyond anterior lateral margin.

Detached/loose tuff: Patches of loose tuff associated with weathering found primarily outside the posterior and anterior margins; two loose patches (~lcm² each) in the anterior portion.

Powdering: none

Other: A void, possibly caused by insect activity, undercut the tuff on the medial margin near the center.

# Conditions related to 1978-79 interventions:

Bedacryl: Thin layer of Bedacryl may have coated the print, but this is uncertain. The marked patch produced a slightly tacky feel when acetone was brushed on the surface.

Embedding: Discrete patch of embedded fines in the central portion, where there is a slight depression in the tuff.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Rootlets located just outside the prints' margin. One root outside lateral margin penetrated tuff and left an impression.

#### Insect activity:

<u>Cut-worm pupal cases</u>: Two impressions of insect casings in tuff outside the prints on the medial side.

### 1996 Interventions

Consolidation/stabilization: Loose tuff was stabilized with Acrysol WS-24 at 25%.

Fills: Void undercutting the medial margin was infilled with a mixture of crushed tuff and Acrysol WS-24.

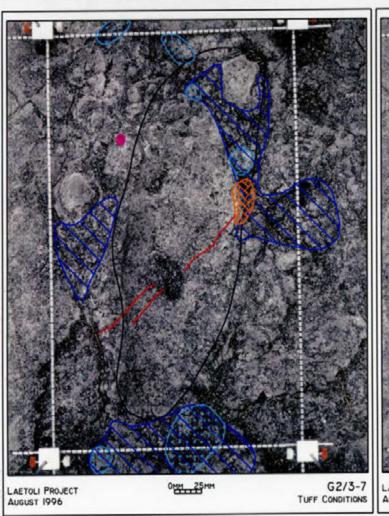
Reattachment: none

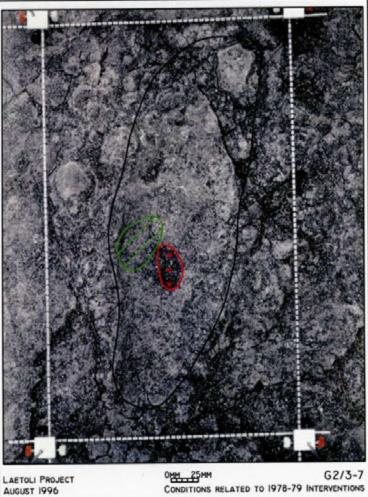
Root treatment: Surface rootlets and roots were removed.

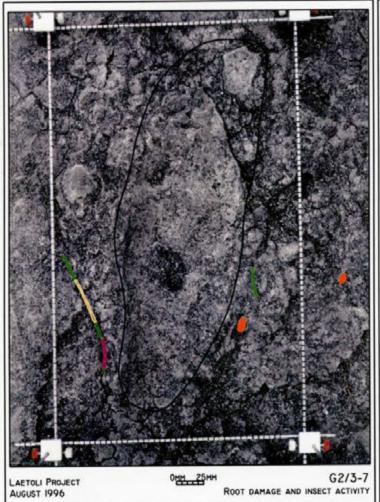
Other: none

# Comparison with 1978-79 Cast/Photograph

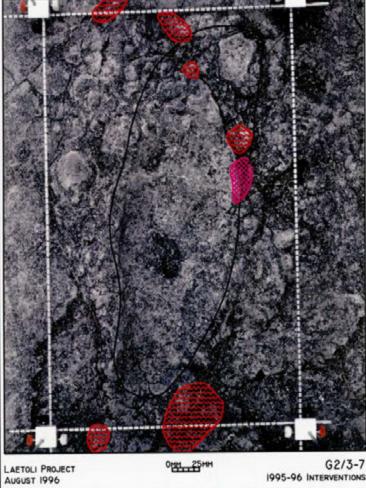
Comparison with the 1978 cast and photos showed only a slight loss of resolution of features on the prints' surface; and slight increase in weathering of tuff outside margin of prints. One of the least altered (best preserved) prints in the northern sector.



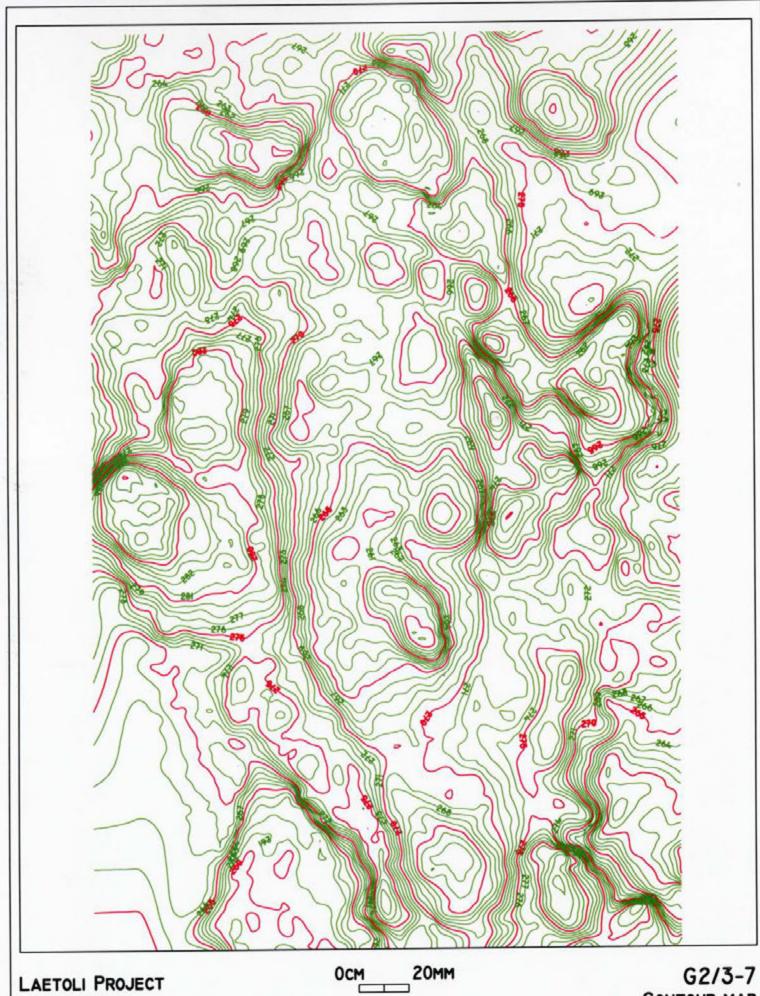




ROOT DAMAGE AND INSECT ACTIVITY



1995-96 INTERVENTIONS



CONTOUR MAP

### Location

Northern sector of trackway, trench 6.

# **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

This is a clear footprint and from its position in the trail is probably right rather than left but it retains little morphology.

### 1995 Condition

General Condition: Moderate alteration: Fair

#### Tuff conditions:

Weathering: Patchy weathering throughout the interior of the prints and outside lateral margin.

Cracking: Two cracks traversed the prints in the anterior portion; one was associated with missing calcite vein.

Losses: none

Detached/loose tuff: Areas of loose tuff associated with weathered tuff.

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none (see Other)

Embedding: Embedded fine particles throughout weathered areas, concentrated in low areas on the uneven surface of the prints.

Silicone: none

Excavation tool marks: none

Inventory number on tuff: none

Other: Remnant of plastic found just outside medial margin. Faint yellow staining in posterior portion and in one patch on the anterior margin; may be from cellulose nitrate, though it did not appear as resinous as other examples found on the northern sector of the trackway.

Root damage: Rootlets on the anterior of the prints penetrated the tuff, but did not significantly disrupt the surface. One 6mm root penetrated the heel.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Loose tuff in weathered areas was stabilized with Acrysol WS-24 at 25%.

Fills: none

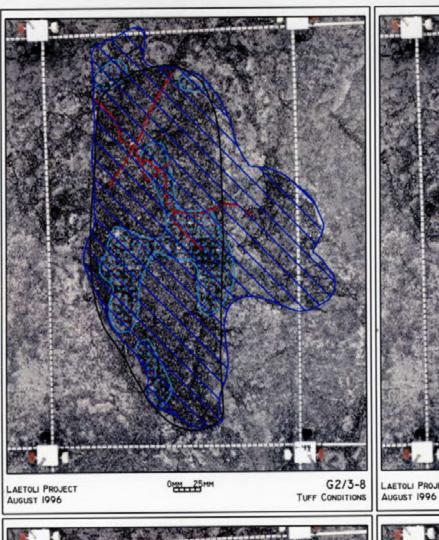
Reattachment: Fragment of tuff (~4cm²) outside the lateral margin was reattached with Paraloid B-72.

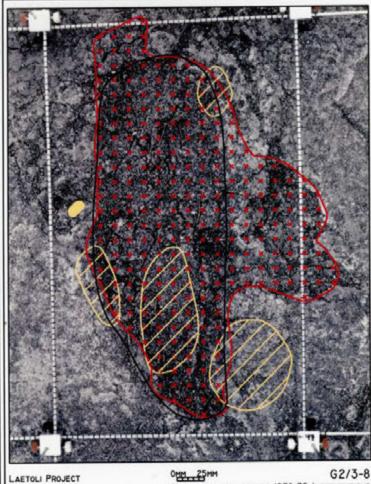
Root treatment: Surface rootlets were removed. 6mm diameter root in heel was cut and reduced to a level just below the tuff surface.

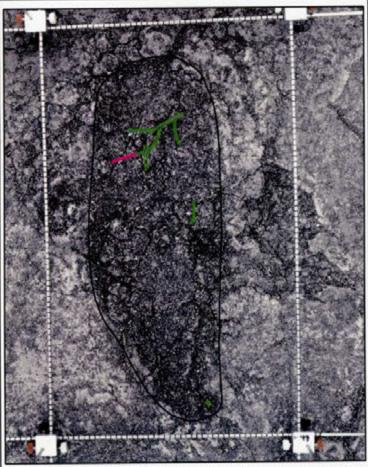
Other: none

# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with the 1978 photos showed a distinct increase in cracking of weathered tuff; cracks enlarged by 1-2mm after excavation. Slight loss of resolution of features on the prints' surface, but print margins retained similar level of definition.







0нн 25мм

LAETOLI PROJECT AUGUST 1996

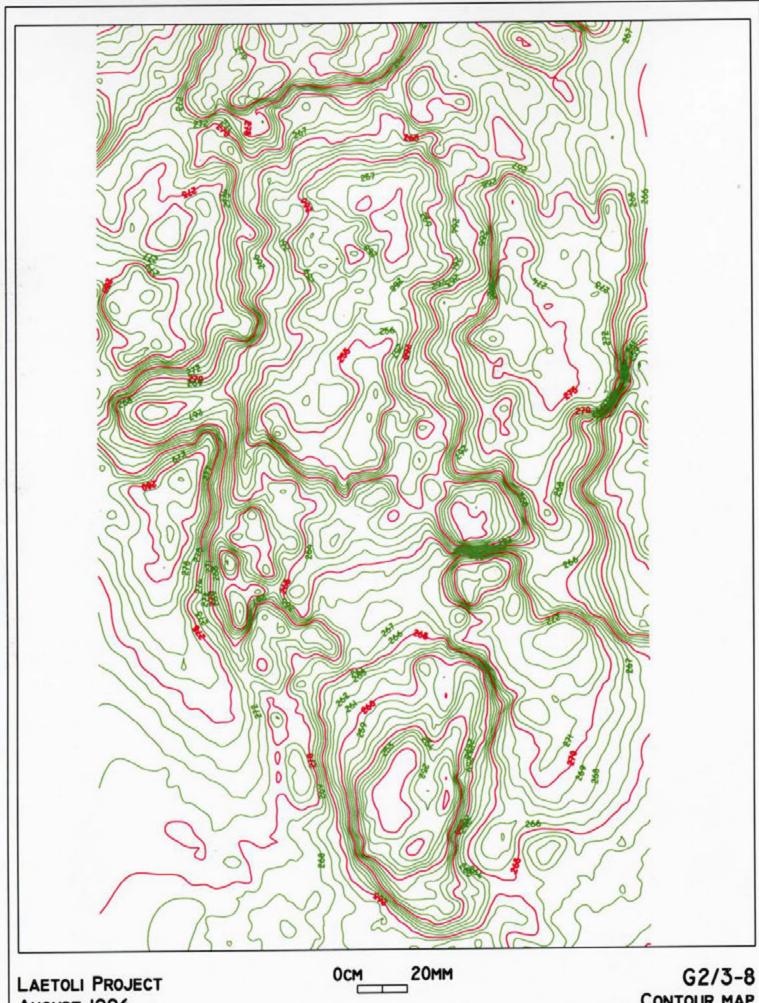
G2/3-8
ROOT DAMAGE AND INSECT ACTIVITY

0мн 25мм

CONDITIONS RELATED TO 1978-79 INTERVENTIONS

LAETOLI PROJECT AUGUST 1996

G2/3-8 1995-96 INTERVENTIONS



CONTOUR MAP

#### Location

Northern sector of trackway, trench 6.

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

1978-1979 Description

Only the impression of G-3 is visible. It is of the left foot and is particularly well preserved. An interesting feature is a small longitudinal ridge down the centre of the print, extending from the division between toes 1 and 2 to almost as far as the heel. Experiments on a dry, fine-grained dusty surface and on a superficially wet surface overlying a firm subsoil have reproduced similar ridges, caused by suction from the sole as the foot is lifted off the ground.

### 1995 Condition

General Condition: Moderate alteration: Fair

Tuff conditions:

Weathering: Moderate weathering throughout prints, though more extensive in G2 print (anterior to G3), and extending outside margins.

Cracking: Large crack traversed G2 and was partially filled with overburden.

Losses: Three minor surface tuff losses: 0.25cm<sup>2</sup> in anterior portion of G3; 0.1cm<sup>2</sup> in center of G2; and 0.5cm<sup>2</sup> well outside of medial margin of prints (just visible at edge of graphic).

Detached/loose tuff: Loose tuff associated with weathering in the posterior portion of G3 and along crack in G2.

Powdering: none

Other: none

Conditions related to 1978-79 interventions:

Bedacryl: Traces of Bedacryl in the form of stringers along medial margin of G3 and posterior portion of G2.

Embedding: Embedded fine particles throughout weathered areas.

Silicone: Extensive traces of silicone both inside and outside of the prints.

Excavation tool marks: none

Inventory number on tuff: none

Other: In 1978, Tim White readhered some of the disrupted medial margin back in place, presumably with cellulose nitrate. The area was stable and well adhered; no traces of the adhesive were visible (area readhered marked on graphic in white).

<u>Root damage</u>: Rootlets were visible in some of the weathered cracks, but caused no disruption (not shown on graphic).

Insect activity:

<u>Cut-worm pupal cases</u>: Three impressions of cut-worm casings in the tuff outside the medial margin of G3.

1996 Interventions

Consolidation/stabilization: Loose tuff on medial margin of G3 was stabilized with Acrysol WS-24 at 25%. Fragment along crack in G2 was stabilized with a 33% solution.

Fills: none

Reattachment: none

Root treatment: Surface rootlets were removed. Rootlets deep within the cracks were not removed.

Other: none

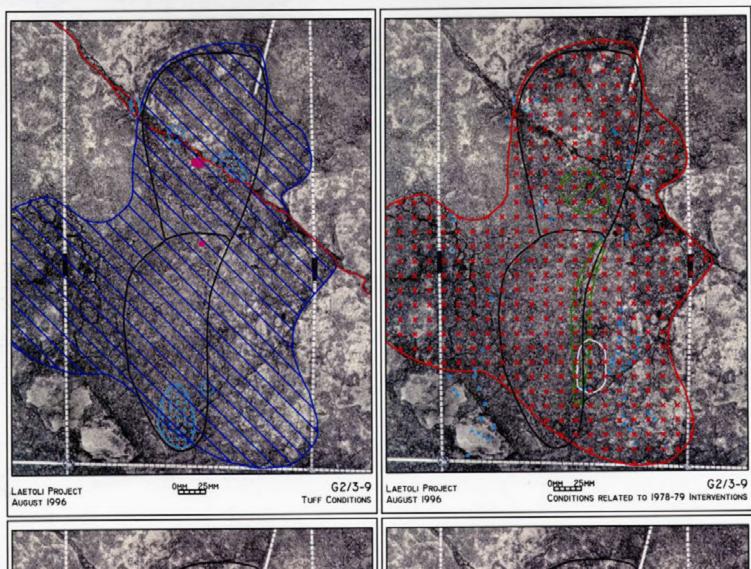
Comparison with 1978-79 Cast/Photograph

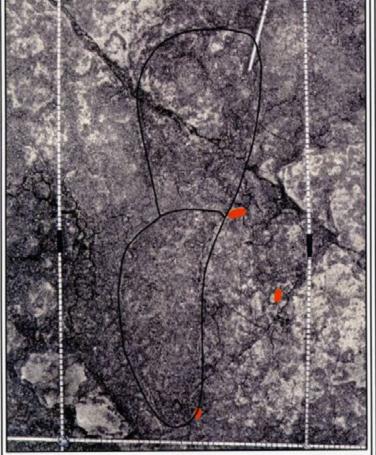
Comparison with the 1978 cast and photos showed increased weathering of the tuff and slight loss of resolution of features on the prints' surface. 1978 photographs tended to capture only the G3 print and not the G2 print to the north (see Notes).

Notes

A remnant of the G2 print, which retains no morphology, was defined in 1996 and is shown in outline on the graphic.

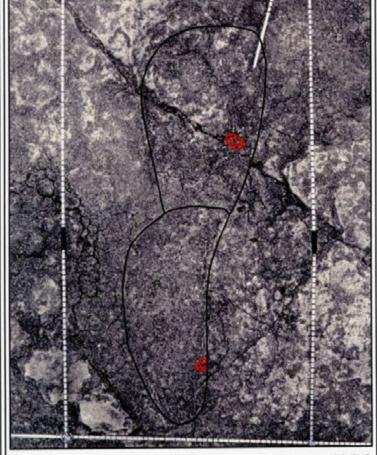
The fill excavated in 1996 consisted of large particles up to 2cm in diameter interspersed with fine soil. The fill was well consolidated, but detached easily from G2 and the center of G3. The fill in the anterior and posterior portions of G3 was more difficult to remove because particles were well adhered to the bottom of the print.





LAETOLI PROJECT AUGUST 1996

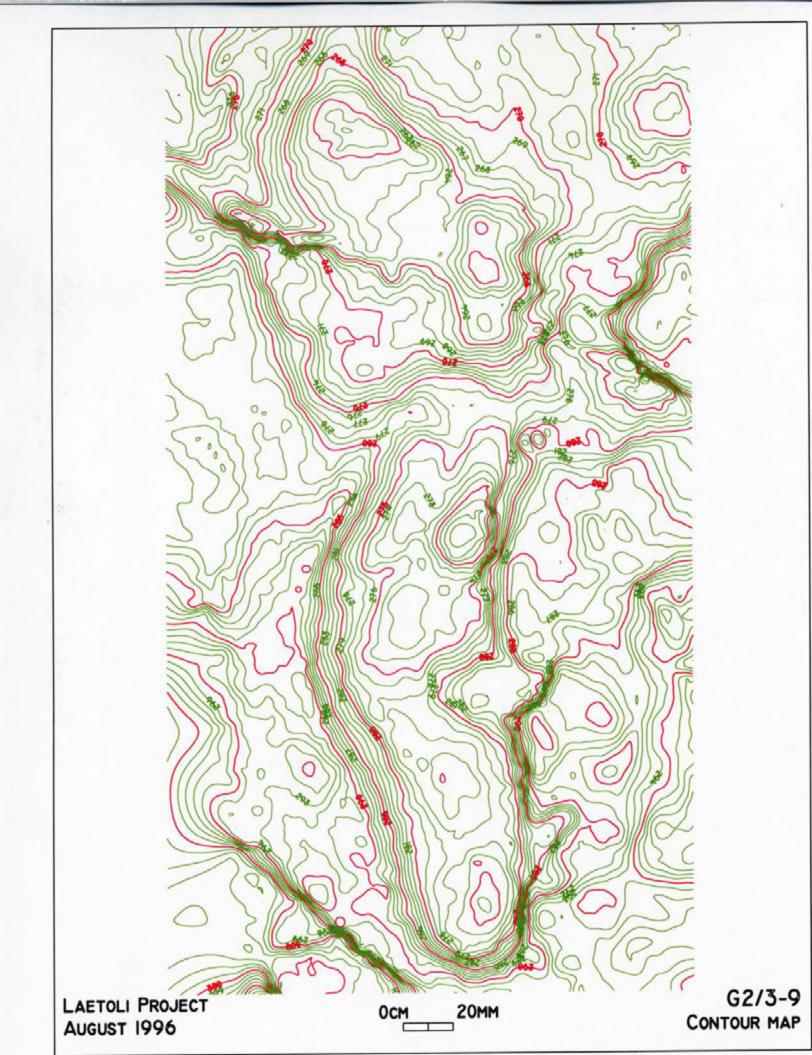
OMM 25MM G2/3-9
ROOT DAMAGE AND INSECT ACTIVITY



LAETOLI PROJECT AUGUST 1996

0нн 25мм

G2/3-9 1995-96 INTERVENTIONS



#### Location

Northern sector of trackway, trench 6.

# **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

### 1978-1979 Description

Partial impression of a footprint, probably right, in the lower part of the Footprint Tuff.

# 1995 Condition

General Condition: Moderate alteration: Fair

### Tuff conditions:

Weathering: Severe weathering in anterior portion of print.

Cracking: 2mm wide crack traversed the posterior portion of print.

Losses: Surficial loss of tuff near medial margin, approximately 2.5cm<sup>2</sup>. Three other small losses along and outside of lateral heel margin, approximately 0.50cm<sup>2</sup> each.

Detached/loose tuff: Loose tuff associated with root penetration of tuff, and in weathered anterior portion.

Powdering: none

Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Deeply embedded fines in weathered areas of tuff.

Silicone: none

Excavation tool marks: none

Inventory number on tuff: none

Other: Slight yellow staining mainly along posterior margins of print (possibly cellulose nitrate).

Root damage: Large 4mm diameter root traversed the print from the central portion to the heel, penetrating the tuff in four places and slightly disrupting the tuff at two penetration points on margins.

# Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Weathered tuff and disrupted tuff at root penetration points was stabilized with Acrysol WS-24 at 25%.

Fills: none

Reattachment: One fragment, ~0.10cm<sup>2</sup> just outside lateral margin was reattached with 25% Acrysol WS-24.

Root treatment: Large root was cut and surface portions were removed, leaving subterranean fragments in situ. Surface rootlets were also removed.

Other: none

# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with the 1978 photos showed slight loss of resolution of features on the prints' surface; an increase in weathering of tuff in anterior portion of the G3 print (cracks in weathered tuff widened during exposure); and minor disruption of tuff from root penetration.

### Notes

The fill excavated in 1996 was compacted and difficult to remove at the bottom of the print due to abundant fine particles embedded on the tuff surface, especially in the anterior portion.

G2/3-11 to 13: Indeterminate

### Location

Northern sector of trackway, trench 6.

# **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

G2/3-11 to 13. Shallow dents lacking all morphology, indeterminate.

### 1995 Condition

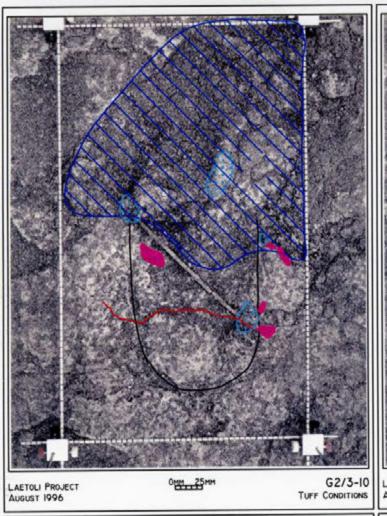
General Condition: Moderate alteration: Fair. Based on condition of the tuff in general area. No individual graphic condition record for prints G2/3-11 to 13. Condition of tuff in area of these prints is recorded on Polaroid flyover X-3, 1996.

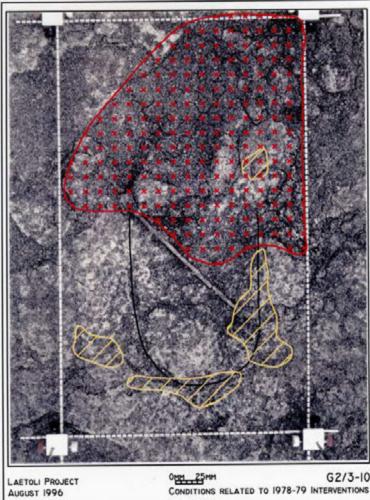
# 1996 Interventions

Interventions in the area of prints G2/3-11 to 13 is recorded on Polaroid flyover X-3, 1996.

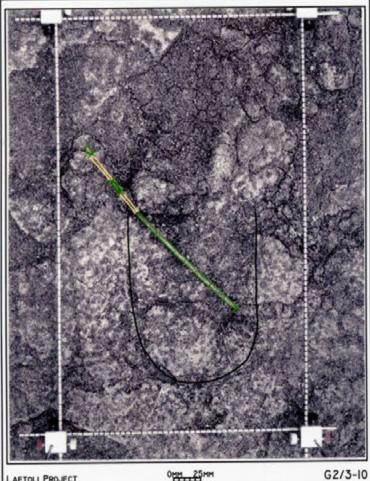
# Comparison with 1978-79 Cast/Photograph

No casts. Comparison with the few available 1978 photos showed a moderate increase in weathering of tuff in this area.



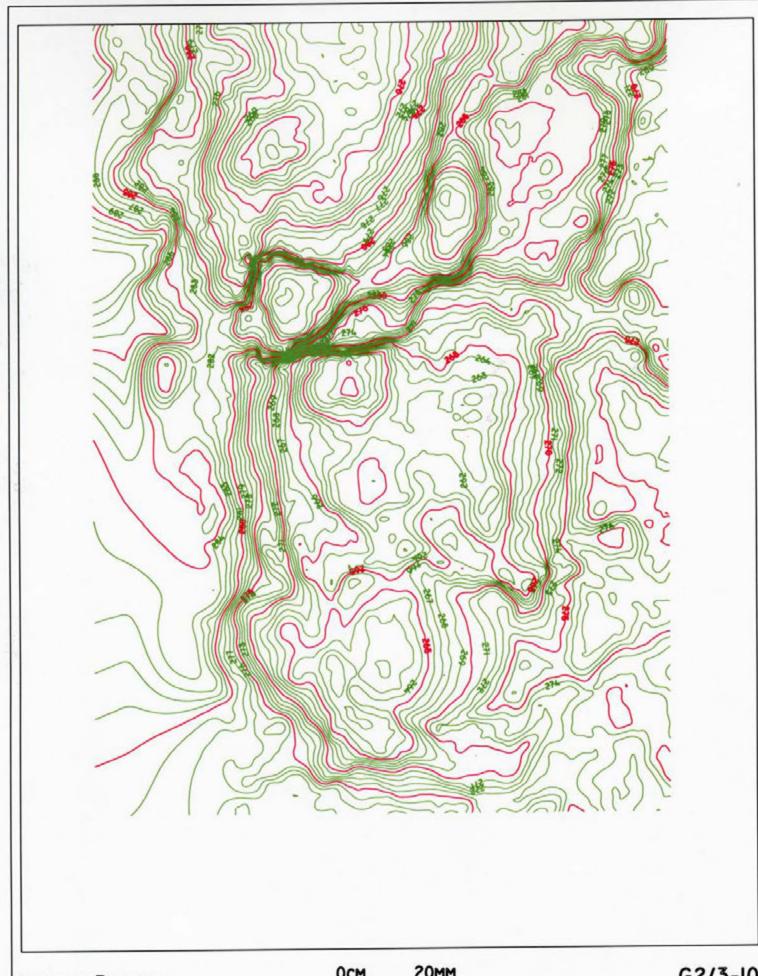


CONDITIONS RELATED TO 1978-79 INTERVENTIONS



LAETOLI PROJECT AUGUST 1996 ROOT DAMAGE AND INSECT ACTIVITY

G2/3-10 1995-96 INTERVENTIONS 0нн 25мм LAETOLI PROJECT AUGUST 1996



0cm 20MM

G2/3-10 CONTOUR MAP

#### Location

Northern sector of trackway, trench 6.

# **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

G2/3-11 to 13. Shallow dents lacking all morphology, indeterminate.

### 1995 Condition

General Condition: Moderate alteration: Fair. Based on condition of the tuff in general area. No individual graphic condition record for prints G2/3-11 to 13. Condition of tuff in area of these prints is recorded on Polaroid flyover X-3, 1996.

### 1996 Interventions

Interventions in the area of prints G2/3-11 to 13 is recorded on Polaroid flyover X-3, 1996.

# Comparison with 1978-79 Cast/Photograph

No casts. Comparison with the few available 1978 photos showed a moderate increase in weathering of tuff in this area.

#### Location

Northern sector of trackway, trench 6.

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

A better defined impression in which the outline of a large print can be determined but in which there is no morphology, indeterminate.

### 1995 Condition

General Condition: Moderate alteration: Fair. Based on condition of the tuff in general area. No individual graphic condition record. Condition of tuff in area of G2/3-14 is recorded on Polaroid flyover IX-3, 1996.

#### 1996 Interventions

Interventions in the area of G2/3-14 recorded on Polaroid flyover IX-3, 1996.

# Comparison with 1978-79 Cast/Photograph

No cast. Comparison with the one available 1978 photo showed a significant increase in weathering of the tuff, which is generally weathered and fragile in this area just north of the graben.

# Notes

Location of the depression identified as a print in 1978 was based solely on recognizable features in the surrounding tuff.

#### Location

Middle sector of trackway, trench 4.

# **Excavation and Reburial History**

Excavated and reburied in 1978; re-excavated and reburied in 1996.

### 1978-1979 Description

G-2/3-15 and 16. Shallow, amorphous dents, indeterminate.

### 1995 Condition

General Condition: Significant alteration: Poor

### Tuff conditions:

Weathering: Severe weathering of tuff along the axis of the prints and in patches outside margins.

Cracking: none

Losses: Surface of powdering tuff slightly abraded as a result of brushing this weakly consolidated tuff.

Detached/loose tuff: Tuff was loose within weathered area inside margins of prints.

Powdering: Areas of tuff along and outside margins of prints were powdery.

Other: none.

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Deeply embedded particles up to 3mm in diameter in the weathered areas, especially in the center of the prints.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Root penetrated tuff outside the posterior margins, and left a distinct root impression when surface root removed. Small rootlets on the surface and within cracks.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Weathered and loose tuff was stabilized with Acrysol WS-24 at 25%.

Fills: none

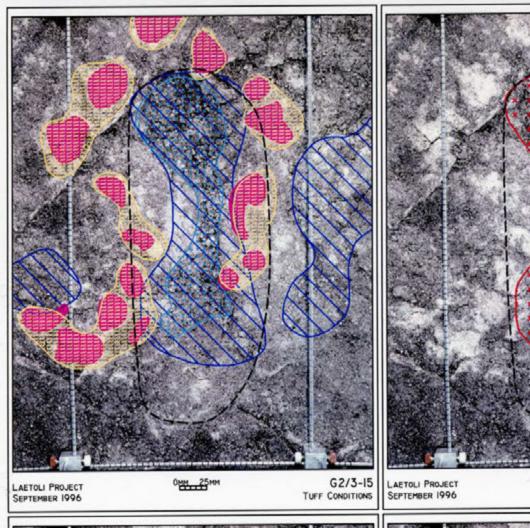
Reattachment: none

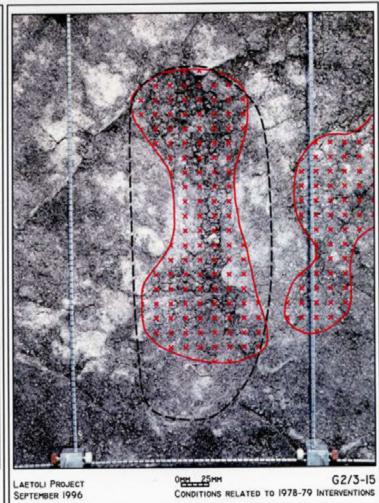
Root treatment: Surface rootlets were removed.

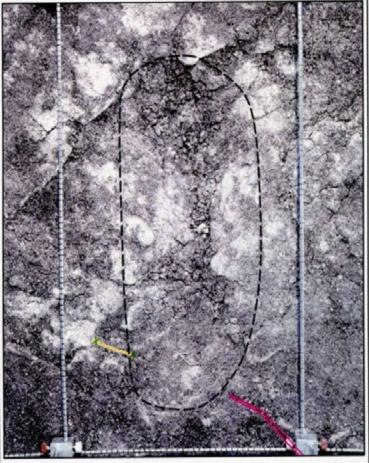
Other: none

# Comparison with 1978-79 Cast/Photograph

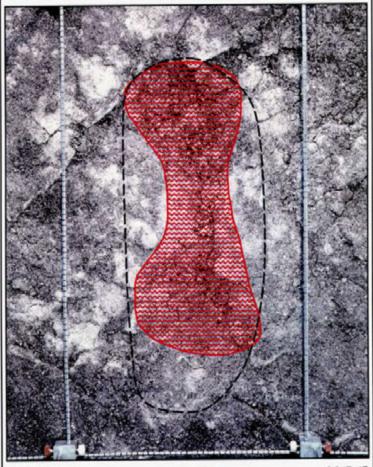
No cast. Comparison with the 1978 photos showed increased weathering of tuff, especially along axis of prints, and particle embedding. It is clear from the 1978 photos and notes that the tuff was in poor condition (weathered, fractured and powdering) in 1978. Print margins are not visible in 1978 photographs; identification of location based on tuff features.







LAETOLI PROJECT 0MM 25MM G2/3-15
SEPTEMBER 1996 ROOT DAMAGE AND INSECT ACTIVITY



LAETOLI PROJECT SEPTEMBER 1996 0<del>нн\_25</del>нн 1995-

G2/3-15 1995-96 INTERVENTIONS

### Location

Middle sector of trackway, trench 4.

# Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

G2/3 -15 and 16. Shallow, amorphous dents, indeterminate.

### 1995 Condition

General Condition: Moderate alteration: Fair

### Tuff conditions:

Weathering: Moderate to severe weathering of tuff in central and posterior portions of the prints.

Cracking: Two 1-2mm wide cracks in anterior portion.

Losses: Slight loss of surface grains in powdering areas of tuff.

Detached/loose tuff: Tuff fragments were loose and easily dislodged throughout the weathered area and in the heel as a result of root penetration.

Powdering: Tuff was powdering in the central portion of the prints.

Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Deeply embedded particles within the weathered area and in the anterior region in a possible lagomorph print.

Silicone: none

Excavation tool marks: none

Inventory number on tuff: none

Other: Small fragment of plastic found on the heel surface.

Root damage: 5mm root penetrated heel margin and caused disruption and dislodging of small tuff fragments. Rootlets present throughout the cracks and weathered tuff.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Weathered and loose tuff in central and posterior regions was stabilized with Acrysol WS-24 at 25%.

Fills: none

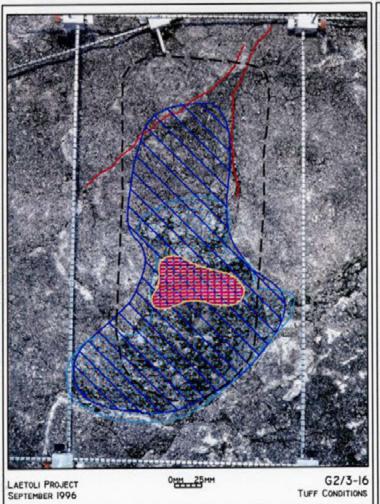
Reattachment: none

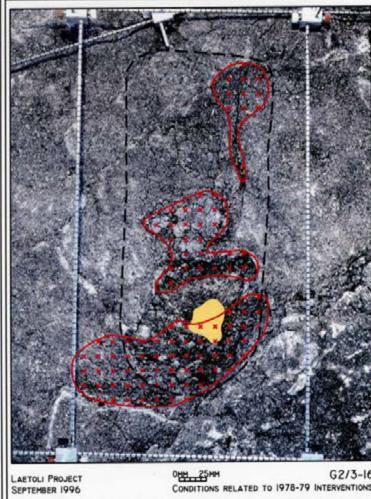
Root treatment: Surface rootlets and exposed portion of 5mm root were removed; subterranean root left in situ.

Other: none

### Comparison with 1978-79 Cast/Photograph

No cast. Comparison with the 1978 photos showed increased weathering of the tuff and particle embedding, especially in the central and posterior regions of the prints. "Rainprints" visible in 1978 photo to the west of the print could not be seen *in situ* due to embedding of overburden in tuff. It was clear from the 1978 photo that G2/3-16 was in poor condition when first excavated. Print margins are not visible in 1978 photographs; identification of location based on tuff features.



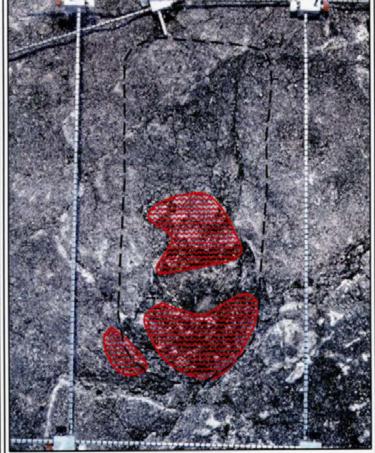






G2/3-16 ROOT DAMAGE AND INSECT ACTIVITY 0HH 25HH

LAETOLI PROJECT SEPTEMBER 1996



0HH 25HH

G2/3-16

1995-96 INTERVENTIONS

CONDITIONS RELATED TO 1978-79 INTERVENTIONS

#### Location

Middle sector of trackway, trench 4.

### Excavation and Reburial History

Excavated and reburied in 1978; re-excavated and reburied in 1996.

# 1978-1979 Description

The surface is cracked and weathered but the print is recognizable as left.

### 1995 Condition

General Condition: Moderate alteration: Fair

### Tuff conditions:

Weathering: Moderate weathering in the anterior and posterior regions and outside the lateral margins.

Cracking: Series of 1-2mm wide cracks along the axis of the prints.

Losses: 2cm2 surface loss in lateral portion of the heel.

Detached/loose tuff: Slight detachment of tuff fragments along subterranean root near lateral print margin, and in small, discrete patches outside of the prints.

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: none

Embedding: Entire area displays shallow particle embedding, but it is concentrated in the low part of heel and in a small patch in the anterior portion of the prints.

Silicone: none

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: One 5mm root and two smaller roots penetrated tuff in the area of the posterolateral margin; the 5mm root caused slight disruption of small tuff fragments. Rootlets present throughout the surface and within cracks.

# Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Loose tuff near lateral margin and outside the prints was stabilized with Acrysol WS-24 at 25%.

Fills: none

Reattachment: none

Root treatment: Surface rootlets and exposed portion of 5mm root were removed.

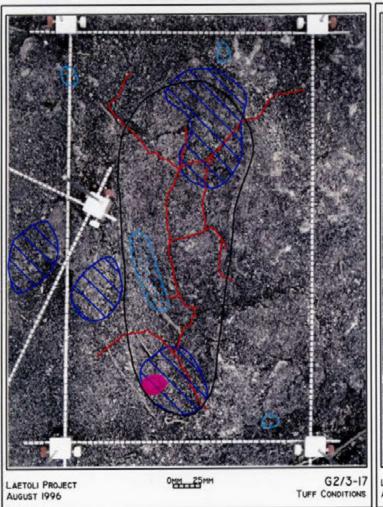
Other: none

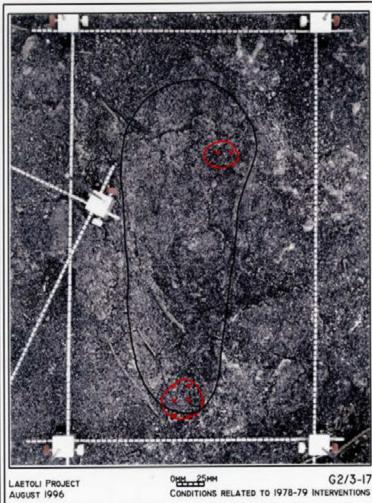
# Comparison with 1978-79 Cast/Photograph

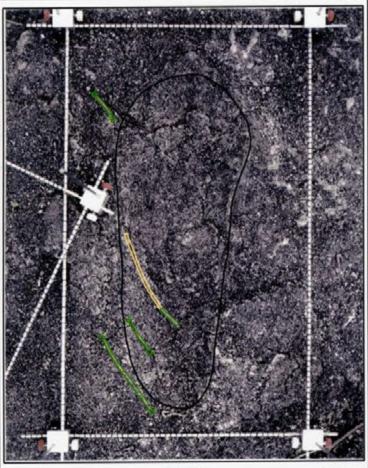
No cast. Comparison with the 1978 photos showed a slight loss of resolution of features on the print's surface; an increase in weathering of tuff and widening of cracks during exposure; as well as particle embedding from overburden.

#### Notes

The 1978 reburial fill excavated in 1996 was moderately consolidated and was removed relatively easily from the prints' surface. Tuff surface inside margins noted as being dark in comparison with surrounding tuff, suggesting application of Bedacryl, although its presence could not be confirmed.





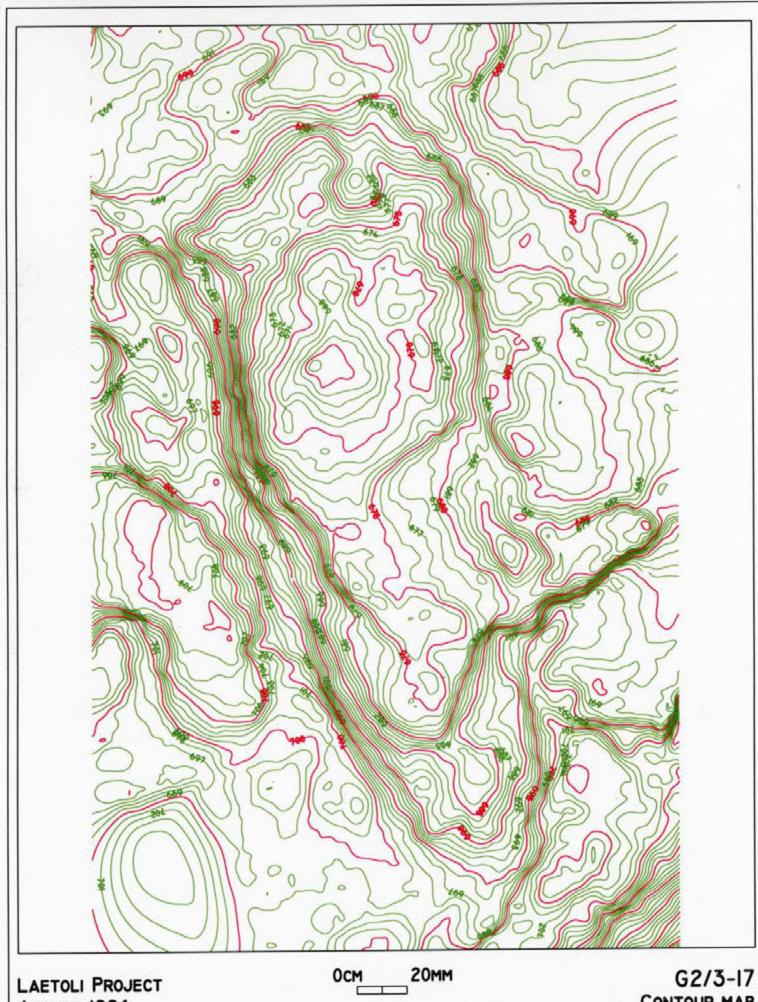


G2/3-17 ROOT DAMAGE AND INSECT ACTIVITY 0нн 25мм

LAETOLI PROJECT AUGUST 1996

G2/3-17 1995-96 INTERVENTIONS 0MM\_\_25MM

CONDITIONS RELATED TO 1978-79 INTERVENTIONS



CONTOUR MAP

#### Location

Southern sector of trackway, trench 2.

**Excavation and Reburial History** 

Partially excavated and reburied in 1978; excavated and reburied in 1979; partially re-excavated and reburied in 1992 and 1993 for assessment; re-excavated and reburied in 1995.

1978-1979 Description

A particularly distinct double right print. The big toe of G-2 had left a well defined and relatively deep impression approximately 53 mm long and 40 mm wide. The G-2 footprints shows drag marks at the rear but the heel impression is obliterated by the G-3 print. The big toe is also well marked in the G-3 print and the front edge of its impression is 40 mm behind the rear edge of the G-2 big toe print.

## 1995 Condition

General Condition: Moderate alteration: Fair

Tuff conditions:

Weathering: Slight weathering in the posterior half of prints.

Cracking: Hairline cracks (~1mm wide) along medial and lateral margins; large crack, located just outside of heel on lateral side, with partially missing calcite vein.

Losses: none

Detached/loose tuff: Tuff detached around spear penetration points (see Other).

Powdering: none

Other: Disruption: two areas of disruption (approximately 0.75cm diam.) in anterior portion of the prints, likely from the penetration of a spear point in 1993 or 1994.

Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout most of the prints and surrounding tuff; it had deteriorated slightly on the bottom of the prints and a small patch was missing in the anterior portion. Area of missing Bedacryl created a marked color difference with the Bedacryl coated parts.

Embedding: Very fine particles of overburden were embedded in the Bedacryl layer (not shown on graphic).

Silicone: none

Excavation tool marks: Tool marks visible on the floor of the prints and along lateral margin, especially in the posterior half; they were less visible in situ than on the cast due to the Bedacryl coating.

Inventory number on tuff: 1979 label ("2-18") visible on tuff surface.

Other: none

Root damage: Surface roots only.

Insect activity: none

1996 Interventions

Consolidation/stabilization: Loose tuff around spear-penetration points was stabilized with Acrysol WS-24.

Fills: none

Reattachment: Disrupted fragments of tuff around spear penetration points were reattached with Paraloid B-72.

Root treatment: Surface rootlets were removed.

Other: none

Comparison with 1978-79 Cast/Photograph
Comparison with the 1979 cast and photos showed loss of resolution of some of the finer details on the prints' surface (such as excavation tool marks) and darkening of surface, both due to the coating of Bedacryl; and slight loss of calcite in crack outside heel margin. Spear penetration points were made in 1993 or 1994 and therefore are not seen in the photos or cast. The missing Bedacryl layer, which creates a noticeable color contrast at the bottom of the prints, was not visible in 1979 photos and may have been removed during the molding process in 1979.







ROOT DAMAGE AND INSECT ACTIVITY

G2/3-18 1995-96 INTERVENTIONS 0нн 25мм LAETOLI PROJECT AUGUST 1995



AUGUST 1996

CONTOUR MAP

# Location

Southern sector of trackway, trench 2.

# Excavation and Reburial History

Partially excavated and reburied in 1978; re-excavated and reburied in 1979; re-excavated and reburied in 1995.

### 1978-1979 Description

A well preserved double left print in which the impressions of G-2 and G-3 can both be seen clearly. There is a fairly deep scuff mark in front of the G-2 toes.

#### 1995 Condition

General Condition: Minor alteration: Good

### Tuff conditions:

Weathering: Slight weathering near lateral margin.

Cracking: Large crack with a maximum width of 2mm traversed the prints; associated with calcite vein.

Losses: 1cm2 loss along crack.

Detached/loose tuff: Localized area of tuff was loose outside the anterior margin of the prints.

Powdering: none

Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout the prints and just beyond the margins. It had deteriorated slightly and was impacted by rootlet penetration on the floor of the prints and extending beyond the anterior margin, and was lost in small discrete areas within the prints. The Bedaryl layer was more thickly applied in the deteriorated areas.

Embedding: Minor embedding of very fine particles in the Bedacryl (not shown on graphic).

Silicone: none

Excavation tool marks: none visible (see Comparison below)

Inventory number on tuff: 1979 label ("2-19") located just beyond the medial heel margin.

Other: none

<u>Root damage</u>: Extensive network of rootlets (indicated as root mat on graphic) penetrated the Bedacryl layer, but did not appear to penetrate the footprint tuff; most are not visible in photo.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Loose tuff beyond the anterior print margin was stabilized with Acrysol WS-24.

Fills: none

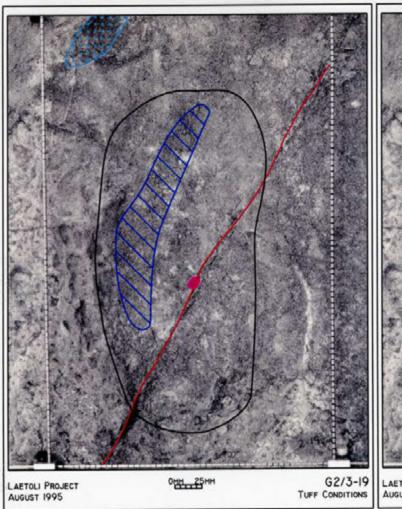
Reattachment: none

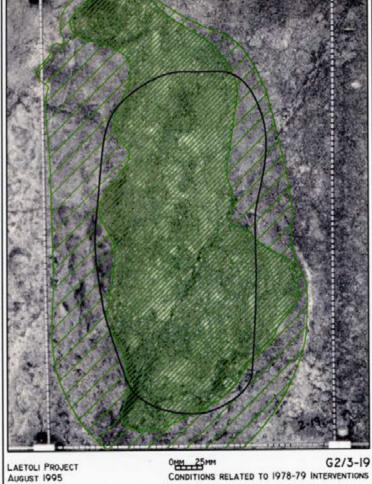
Root treatment: Surface rootlets were removed. Since removal of the rootlets penetrating Bedacryl layer would have caused disruption to the layer, most were not removed.

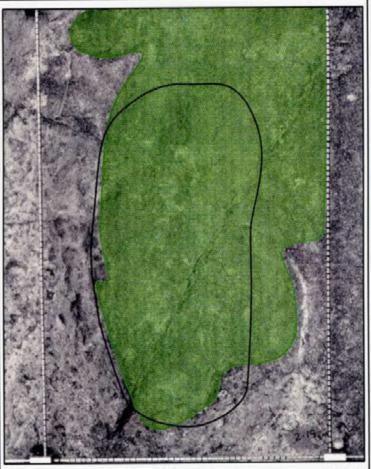
Other: none

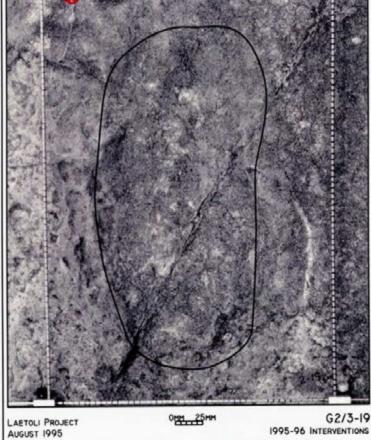
### Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed slight loss of resolution of some of the finer details on the prints' surface, particularly at the bottom, and darkening of the surface, both due to the coating of Bedacryl. Tool marks were visible in the cast that were obscured by the Bedacryl coating in situ and calcite ridge in crack was more prominent in cast than in situ.





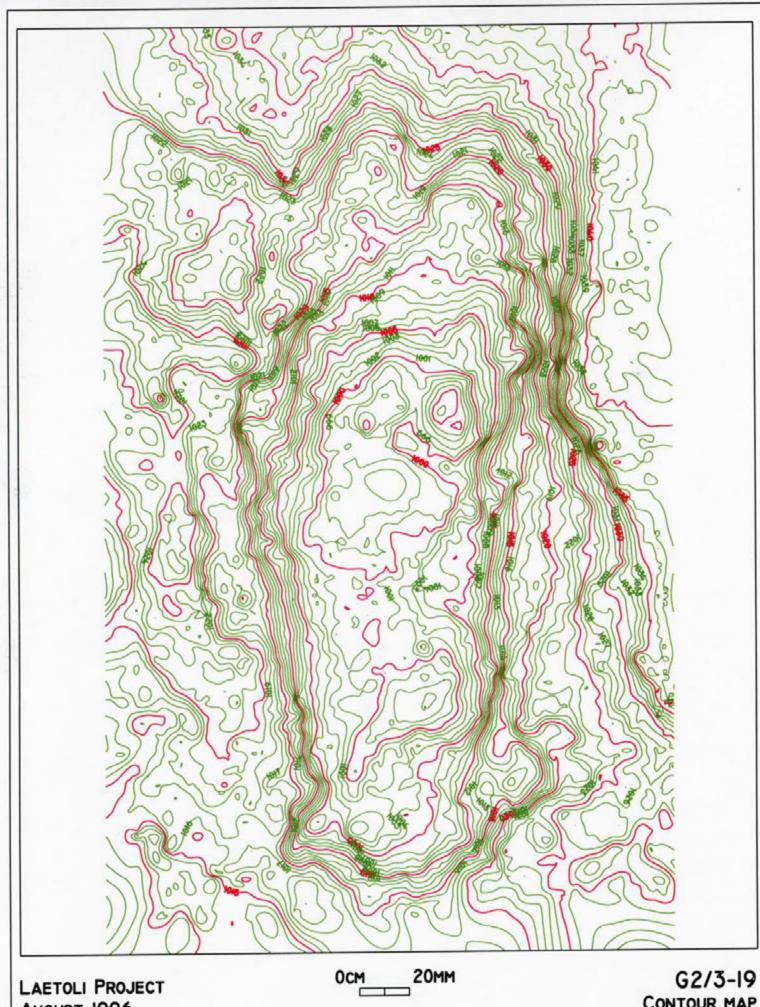




LAETOLI PROJECT AUGUST 1995

G2/3-19 ROOT DAMAGE AND INSECT ACTIVITY 0мм 25мм

G2/3-19 0мм 25мм 1995-96 INTERVENTIONS



CONTOUR MAP

#### Location

Southern sector of trackway, trench 2.

#### Excavation and Reburial History

Partially excavated and reburied in 1978; re-excavated and reburied in 1979; re-excavated and reburied in 1995.

### 1978-1979 Description

A less well defined double right print. It is difficult to distinguish the footprint of G-3 from that of G-2, probably on account of damage to the surface by burrowing insects.

#### 1995 Condition

General Condition: Minor alteration: Good

# Tuff conditions:

Weathering: none

Cracking: Three 1-2mm wide cracks extended outward from print margins.

Losses: none

Detached/loose tuff: none

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout the prints and just beyond the margins. It had slightly deteriorated on the floor of the prints and was penetrated by rootlets, and was lost in small discrete areas.

Embedding: Minor embedding of very fine particles of overburden in the Bedacryl layer (not shown on graphic).

Silicone: none

Excavation tool marks: none

Inventory number on tuff: 1979 label ("2-20") located just beyond the lateral heel margin.

Other: none

Root damage: Network of rootlets penetrated the Bedacryl layer, especially in the posterior portion (shown as root mat on graphic), but did not appear to penetrate the tuff.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: none

Fills: none

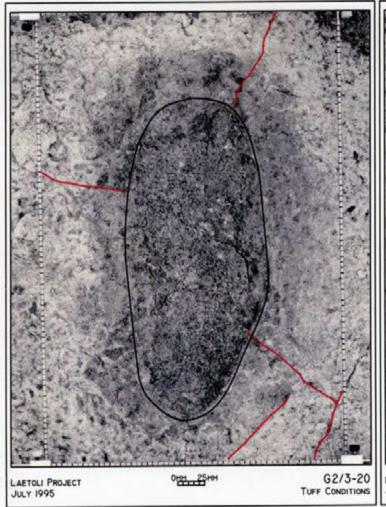
Reattachment: none

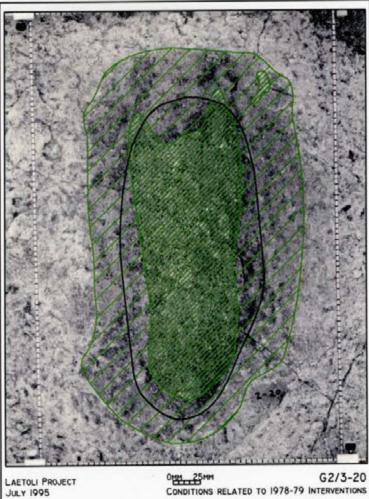
Root treatment: Surface rootlets were removed.

Other: none

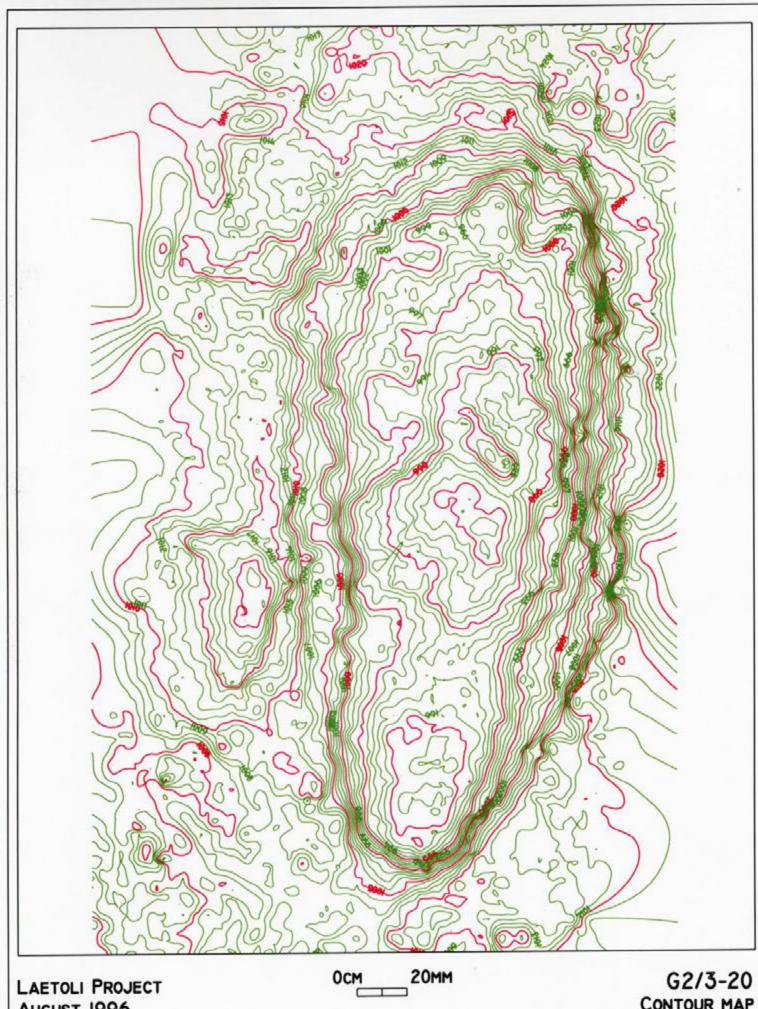
# Comparison with 1978-79 Cast/Photograph

Comparison with the 1979 cast and photos showed slight loss of resolution of some of the finer details on the prints' surface, particularly on the floor of the prints, and darkening of the surface; both due to the coating of Bedacryl.









AUGUST 1996

CONTOUR MAP

### Location

Southern sector of trackway, trench 2.

# **Excavation and Reburial History**

Excavated and reburied in 1979; partially re-excavated and reburied in 1992 and 1993 for assessment; re-excavated and reburied in 1995.

# 1978-1979 Description

A double left footprint retaining little morphology since it lies in the weathered and root-damaged part of the trails, on the uplifted block south of the main fault.

#### 1995 Condition

General Condition: Significant alteration: Poor

### Tuff conditions:

Weathering: Moderate to severe weathering throughout the prints and the surrounding tuff. G2/3-21 is located in the weathered strip of tuff in the southern sector of the trackway, characterized by patterned cracking with deep fissures that are filled with overburden. Cracking: Significant cracking throughout the prints associated with weathering of tuff; a single crack in consolidated tuff enters print from outside posteromedial margin (see Comparison).

Losses: none

Detached/loose tuff: Loose tuff associated with root penetration.

Powdering: none

Other: Disruption: one 2-3mm<sup>2</sup> area of tuff disrupted in heel portion, likely from the penetration of a spear point.

### Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout the prints and surrounding tuff. It had slightly deteriorated near the center of the prints, and was lost in discrete areas.

Embedding: Fine particles were embedded in the weathered tuff (not shown on graphic).

Silicone: Remnants of silicone located within and exterior to the prints.

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Large 10mm diameter root from stump no. 83 passed through the lateral and medial margins of the prints, causing considerable disruption of the overlying and surrounding tuff and leaving a root impression on the surface where portions were removed. Some subterranean root fragments were left *in situ* because they could not be removed without damaging the tuff. Rootlets penetrated throughout the weathered tuff.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Loose tuff along root penetration areas, adjacent to lateral and medial margins, was consolidated with 4% dispersion of Acrysol WS-24 followed by full bottle strength.

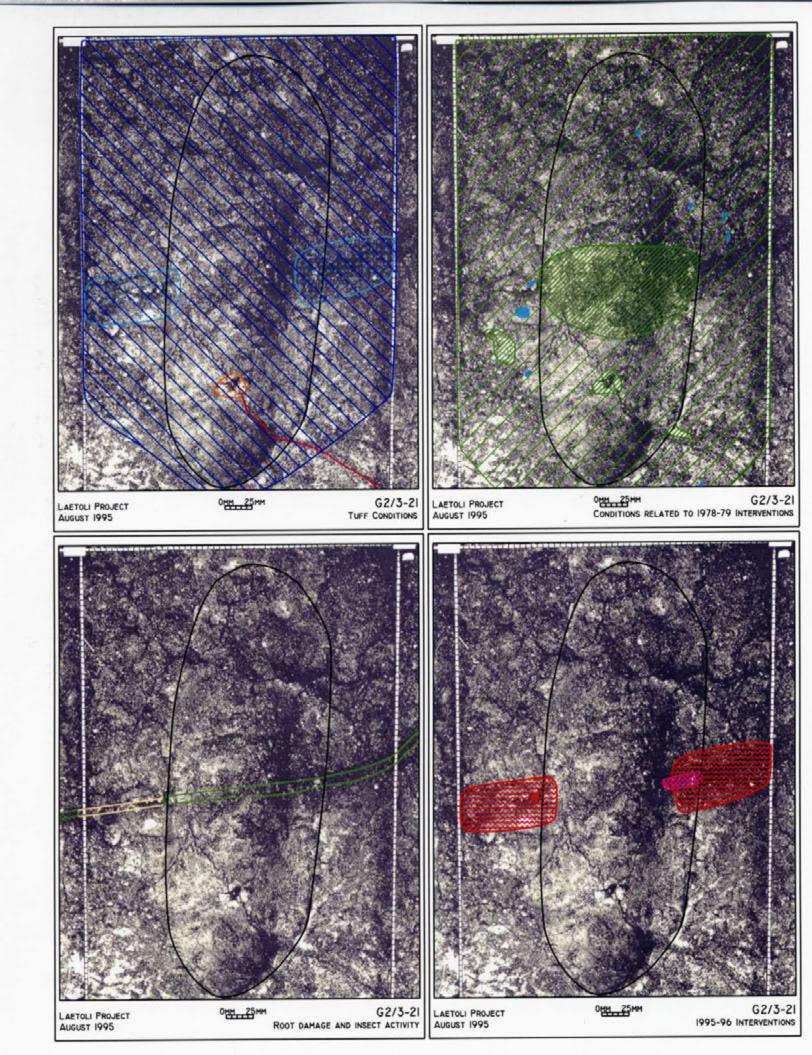
Fills: Acrysol and fumed silica mixture was used to fill a void left from a removed root, on the medial margin.

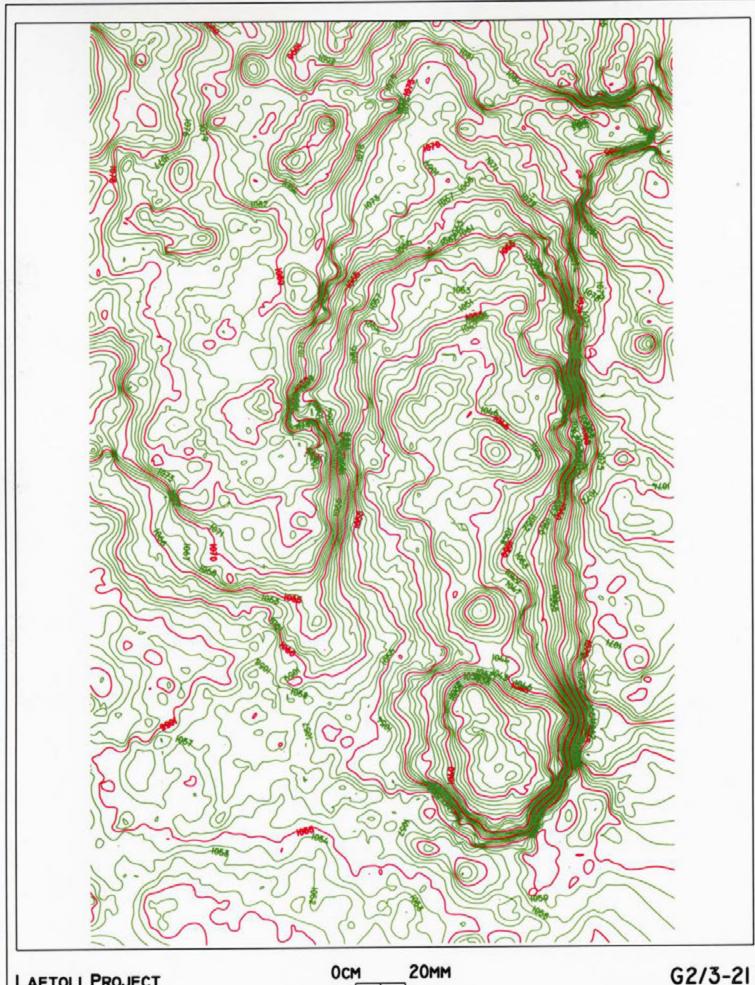
#### Reattachment: none

Root treatment: Penetrating root was cut; surface portions were removed, leaving a root impression; a portion of the subterranean root, ~3.3cm long, was also removed and the void filled. Surface rootlets were removed.

Other: none

Comparison with 1978-79 Cast/Photograph
Comparison with the 1979 photos showed a loss of resolution of details on the prints' surface due to increased weathering and to the coating of Bedacryl. Root and spear point penetration marks were new, but the crack on the posteromedial margin was evident in 1978 photos. The 1979 cast was made prior to complete excavation and was not relied upon for comparison.





0CM\_\_\_\_

G2/3-21 CONTOUR MAP

## Location

Southern sector of trackway, trench 2.

Excavation and Reburial History

Excavated and reburied in 1979; partially re-excavated and reburied in 1992 and 1993 for assessment; re-excavated and reburied in 1995.

1978-1979 Description

A shallow depression in the lower part of the Footprint Tuff. From its position in the trails it is probably of right feet. This is the most northerly of the G-2/3 footprints in the southern sector of the trails and it is on the uplifted block where the surface of the tuff is virtually at ground level. (see Notes)

1995 Condition

General Condition: Significant alteration: Poor

Tuff conditions:

Weathering: Severe weathering throughout the prints and the surrounding tuff. G2/3-22 is located in the weathered strip of tuff in the southern trackway, characterized by patterned cracking with deep fissures.

Cracking: Significant cracking throughout the prints, averaging 2-3mm wide, associated with weathering of the tuff.

Losses: none

Detached/loose tuff: Loose patches of tuff in the anterior portion, near the lateral margin, and associated with stump no. 83 in the posterior portion.

Powdering: none Other: none

Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl was not detected, though 1978 photographs showed dark staining which may be Bedacryl.

Embedding: Fine particles were embedded in the weathered tuff, especially in the cracks.

Silicone: Minor remnants of silicone rubber located within the prints.

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Large acacia stump no. 83 (the source for the root that also damaged G2/3-21) penetrated the heel. There was no significant disruption of the tuff surrounding the root, though the penetration area is large (~15cm²). A deep root impression was left in and beyond the posterior margin where surface portions were removed. Rootlets penetrated throughout the weathered tuff.

Insect activity: none

### 1996 Interventions

Consolidation/stabilization: Small, localized areas of loose tuff were stabilized with Acrysol WS-24.

Fills: none

Reattachment: none

Root treatment: Stump no. 83 was cut; surface portions were removed; and a wood preservative (pentachlorophenol) was applied. Surface rootlets were removed.

Other: none

Comparison with 1978-79 Cast/Photograph

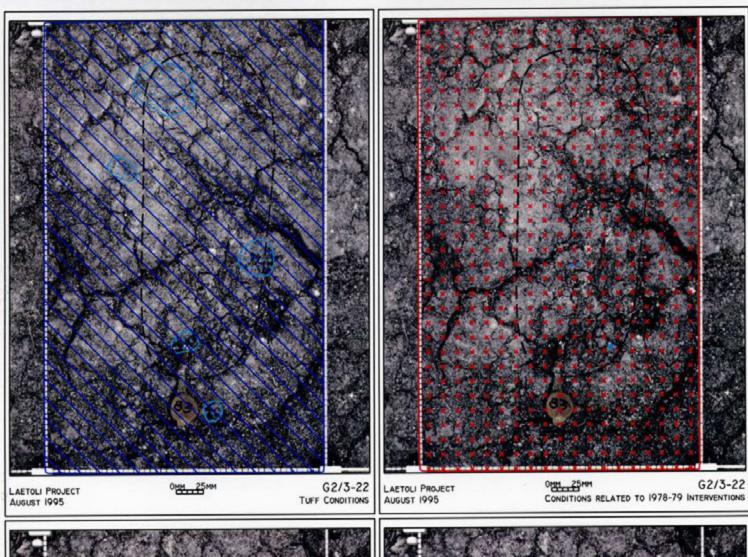
Comparison with the 1979 photos showed increased weathering of the tuff and disruption and deformation of the tuff where stump and root penetrated. Loss of resolution on the prints' surface and margins were also noted. The 1979 cast was made prior to complete excavation and was not relied upon for comparison.

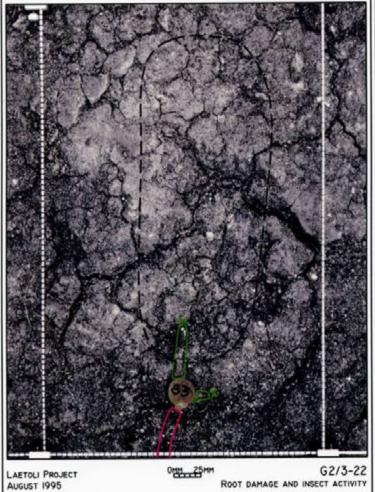
Notes

Print margin was very difficult to distinguish due to weathered condition, but the tuff features could

be identified from the 1979 photos.

The description of prints G2/3-22 from the Laetoli monograph corresponds more accurately with the location and circumstances of preservation of G2/3-23 (see 1996-1998 Report on the Laetoli Project, p. 13 for discussion of this discrepancy).

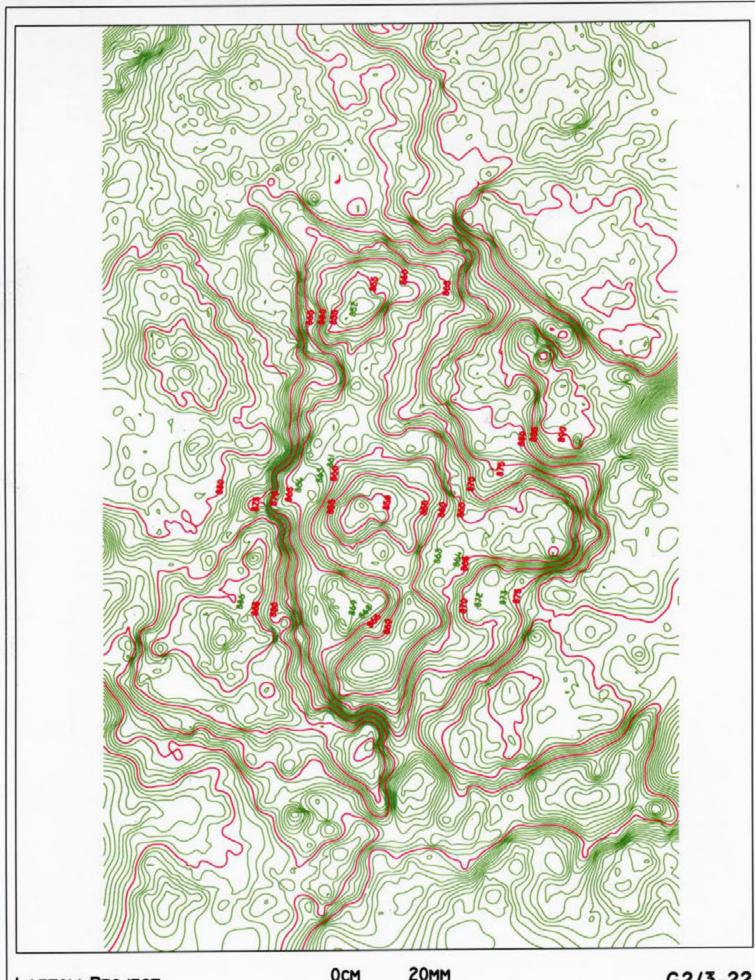




G2/3-22 0MM 25MM ROOT DAMAGE AND INSECT ACTIVITY



1995-96 INTERVENTIONS



0cm\_\_\_\_20mm

G2/3-22 CONTOUR MAP

## Location

Southern sector of trackway, trench 3.

# **Excavation and Reburial History**

Excavated and reburied in 1979; re-excavated and reburied in 1996.

## 1978-1979 Description

A shallow heel impression immediately north of the main transverse fault. Its isolated position makes it impossible to determine whether it is right or left. (see Notes)

# 1996 Condition

General Condition: Although an individual graphic record was made of this print, it was not transferred to electronic format since this area was completely devoid of any features that could be interpreted as a footprint outline. The well-consolidated tuff is this area was generally in good condition, but lies below the Footprint Tuff.

## 1996 Interventions

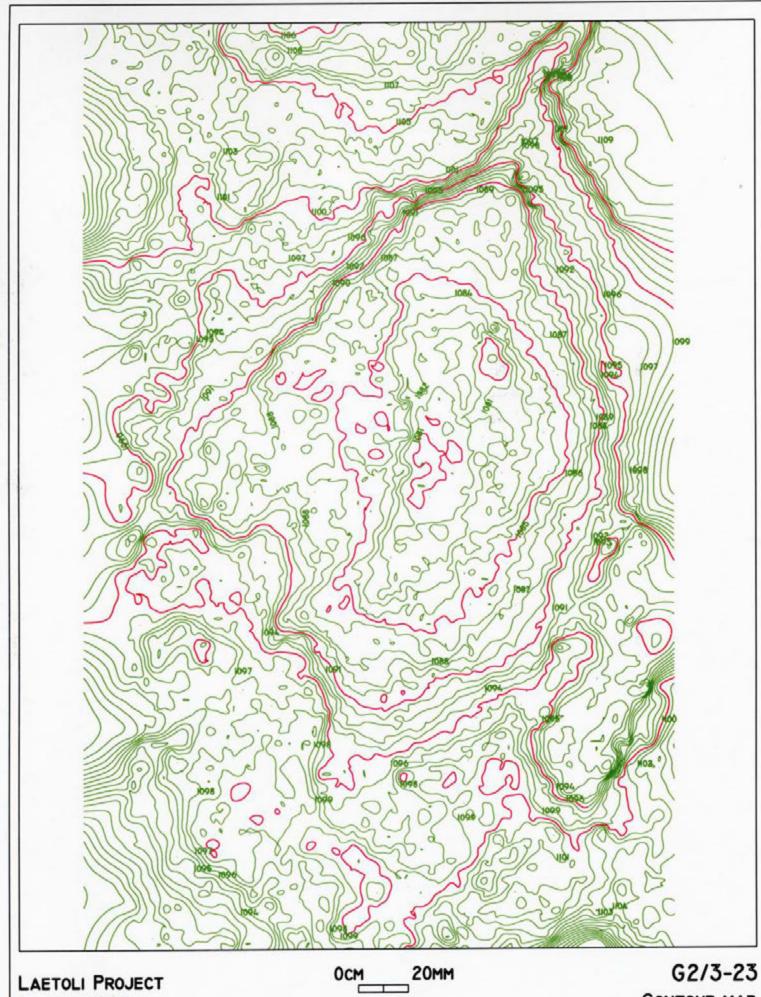
No interventions undertaken in area of prints.

# Comparison with 1978-79 Cast/Photograph

No cast or photos were available for this footprint.

# Notes

The description of print G2/3-23 from the Laetoli monograph as being located "immediately north of the main transverse fault" is somewhat problematic since it is located north of the weathered strip of tuff (see 1996-1998 Report on the Laetoli Project, p. 13 for discussion of the numbering of G2/3-22 and 23).



AUGUST 1996

## Location

Southern sector of trackway, trench 2.

## Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995.

1978-1979 Description

Dual left footprints. The heel of G-2 has been obliterated by the superimposed G-2\* print but the heel of G-3 is well defined. The anterior parts of both footprints retain little morphology.

[\*This should read G-3]

## 1995 Condition

General Condition: Minor alteration: Good

# Tuff conditions:

Weathering: none

<u>Cracking</u>: Three distinct cracks, 2 filled with calcite, traversed the print's anterolateral and posteromedial margins.

Losses: Portion of prominent calcite vein and a bit of surface tuff was lost just beyond anterior posterior margin.

Detached/loose tuff: none

Powdering: none Other: none

Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout most of the prints and surrounding tuff. Bedacryl had deteriorated in patches around the margin of the prints.

Embedding: Embedding of fine particles in the Bedacryl layer.

Silicone: Minor traces of silicone outside posterior margin of the prints. Excavation tool marks: Faintly visible in the toe and on the lateral margin.

Inventory number on tuff: 1979 label ("2-24") located just beyond the medial heel margin.

Other: none

Root damage: Abundant rootlets penetrated the Bedacryl layer but did not appear to penetrate the footprint tuff.

Insect activity: none

## 1996 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

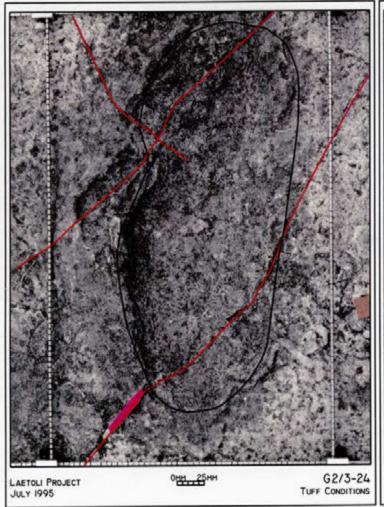
Root treatment: Surface rootlets were removed.

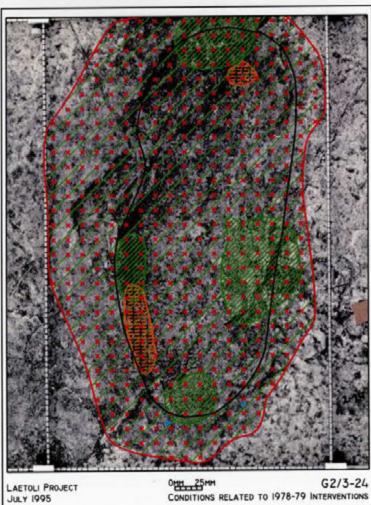
Other: none

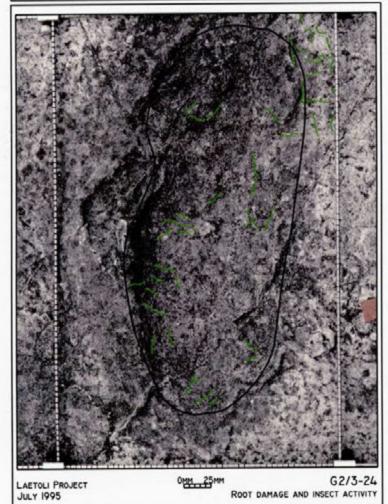
Comparison with 1978-79 Cast/Photograph

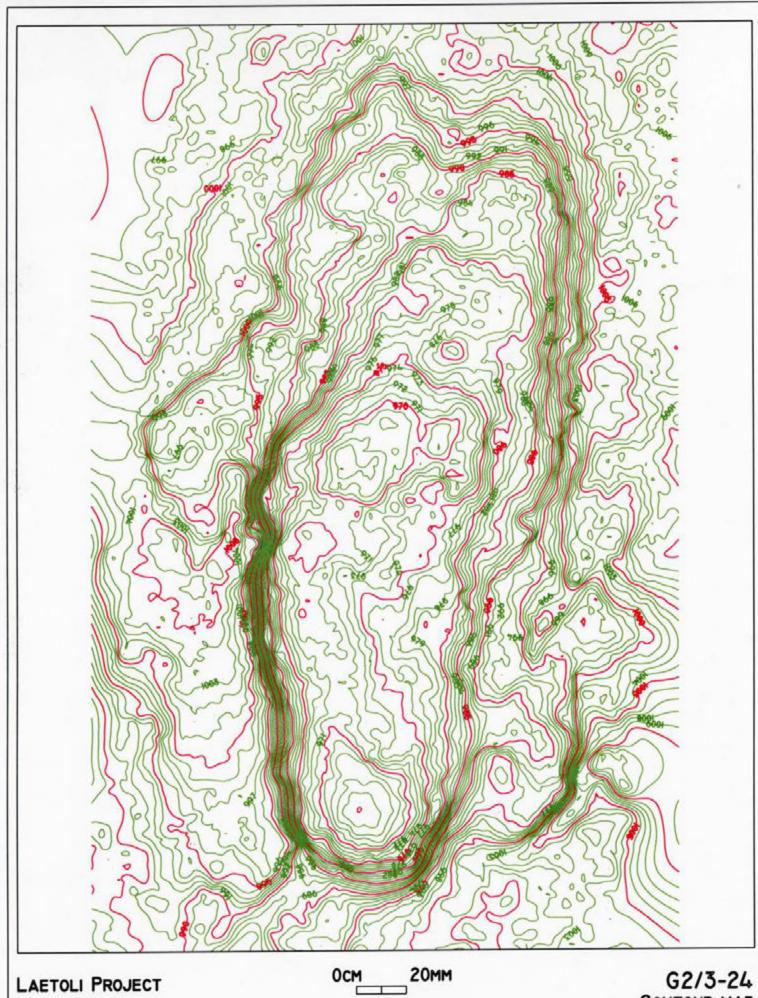
Comparison with the 1979 cast and photos showed loss of resolution of details on the prints' surface such as tool marks, which were clearly visible in cast and photos, but only faintly visible in situ due to the Bedacryl coating and to the fine particles embedded in it. The prints were darker in color for the same reason. Calcite veins seen in the cast were still clearly visible in the print.

Notes
The field cast showed several surface irregularities, which were related to the repairs of the master mold carried out in 1995.









## Location

Southern sector of trackway, trenches 1 - 2.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995

# 1978-1979 Description

Dual right footprints. An attempt was made to locate the position of the G-2 heel print and this has resulted in an apparent heel impression which is invalid.

## 1995 Condition

General Condition: Minor alteration: Good

## Tuff conditions:

Weathering: none Cracking: none

Losses: 0.25cm<sup>2</sup> loss of surface tuff outside of the anteriomedial margin.

Detached/loose tuff: none

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl found throughout the prints and surrounding tuff. Bedacryl had deteriorated or was lost in small patches on the floor of the prints.

Embedding: Fine particles of overburden were embedded in the Bedacryl (not shown on graphic).

Silicone: none

Excavation tool marks: see Comparison.

Inventory number on tuff: none

Other: none

# Root damage: none

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: none

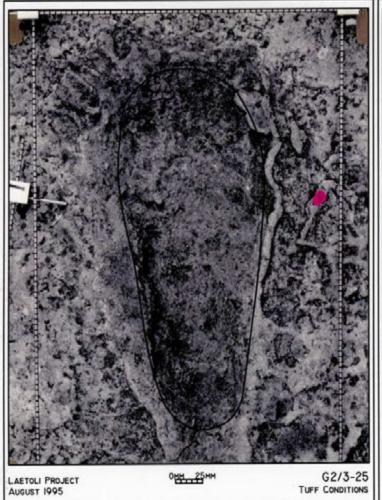
Fills: none

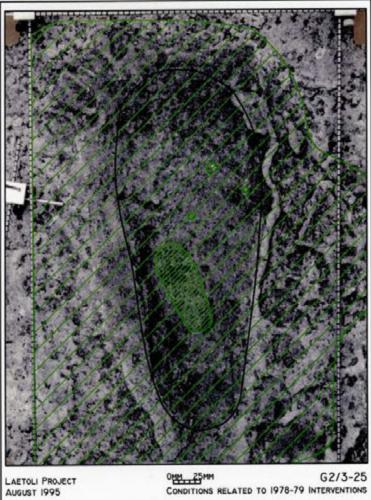
Reattachment: none Root treatment: none

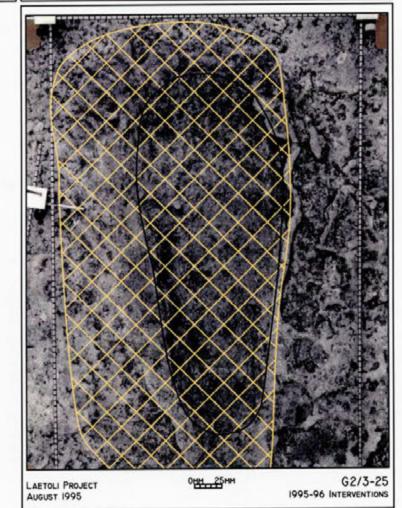
Other: Bedacryl was cleaned from the prints with acetone in a cotton poultice (Polaroid shows print before cleaning).

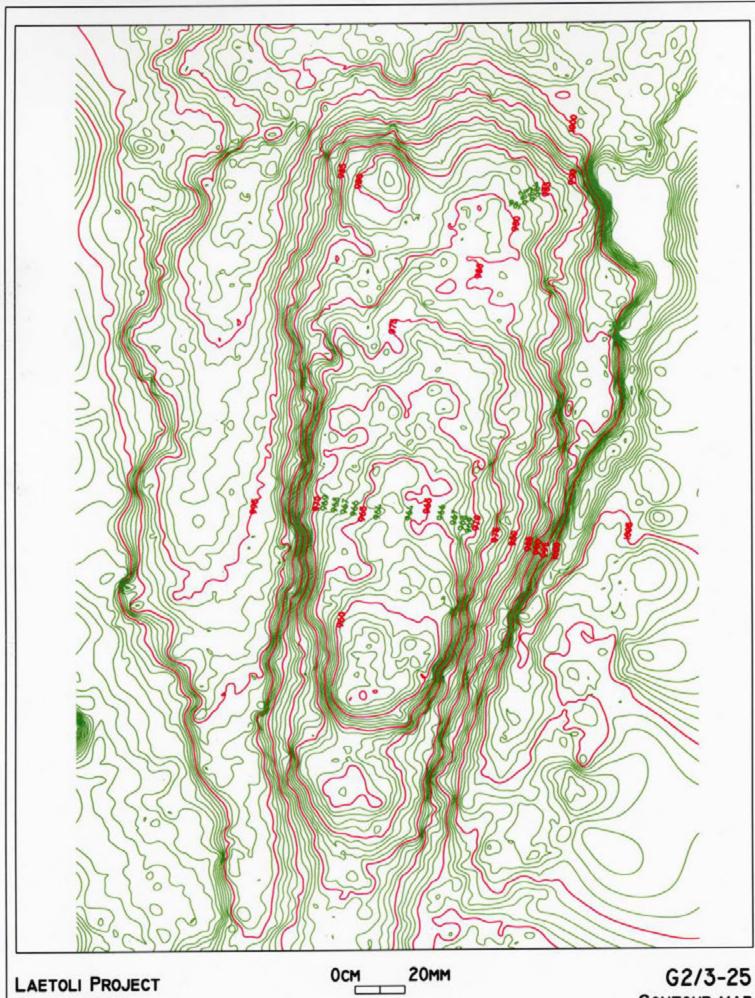
# Comparison with 1978-79 Cast/Photograph

Prior to cleaning, comparison with the 1979 cast and photos showed a slight loss of resolution on the prints' surface due to the Bedacryl coating and to the fine particles embedded in it. After cleaning, comparison showed a higher level of detail, though tools marks clearly seen in the heel of the casts were not as prominent in situ.









AUGUST 1996

## Location

Southern sector of trackway, trench 1.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995

1978-1979 Description

Well preserved dual left footprints. The heel print of G-2 is obliterated but the toe impression of both G-2 and G-3 are clearly defined.

## 1995 Condition

General Condition: Minor alteration: Good

# Tuff conditions:

Weathering: none

<u>Cracking</u>: A hairline crack was visible outside of lateral margin of the anterior portion of prints (comparison with the cast showed the crack continued through the toe area, but this was not apparent in situ).

Losses: Abrasion on the prominent ridges of tuff posterior to the heel margin (see Comparison).

Detached/loose tuff: none

Powdering: none Other: none

Conditions related to 1978-79 interventions:

Bedacryl: Thin layer of Bedacryl throughout the prints and surrounding tuff surface; deteriorated patches near center and posterior portion; small patches of Bedacryl loss within each of the deteriorated areas.

Embedding: Slight embedding of fine particles in Bedacryl layer (not shown on graphic).

Silicone: Traces of silicone outside posterior margin.

Excavation tool marks: Tool marks visible just inside and outside the lateral margin (see Comparison).

Inventory number on tuff: Two 1979 inventory numbers ("2-26" and "2-25") visible on tuff surface beyond the medial heel margin.

Other: none

Root damage: Surficial rootlets penetrated the Bedacryl layer, but not the tuff.

Insect activity: none

## 1996 Interventions

Consolidation/stabilization: none

Fills: none

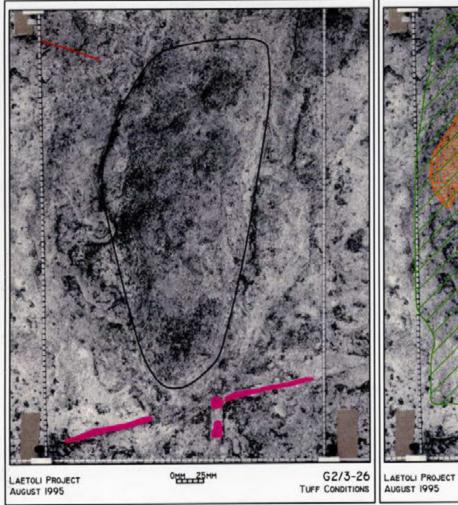
Reattachment: none

Root treatment: Surface rootlets were removed.

Other: none

Comparison with 1978-79 Cast/Photograph

Comparison with 1979 cast and photos showed only slight loss of resolution of details due to the Bedacryl layer and particle embedding within the Bedacryl. Tool marks visible on the cast in the ball of the G-2 print, and a hairline crack visible in the photos and cast running across the anterior portion of the prints, were obscured *in situ*. Abrasion of the tuff surface noted on the T-shaped ridge outside the print was evident on the cast, except for the abrasion of the right side of the "T", which appeared to be fresh.

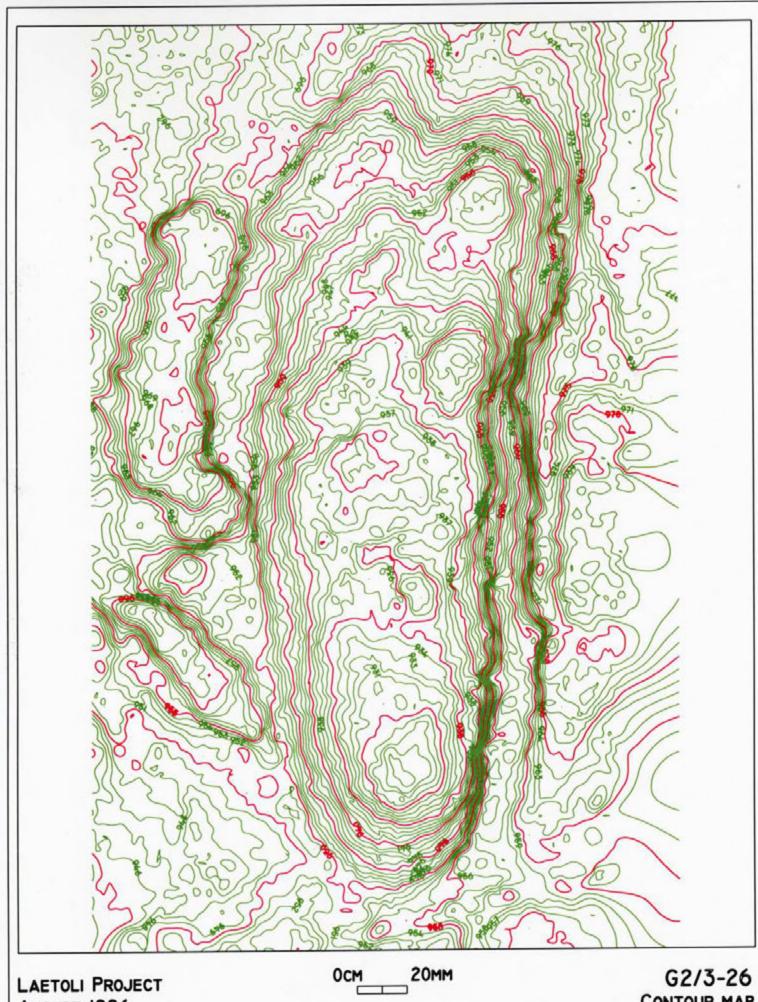




G2/3-26

CONDITIONS RELATED TO 1978-79 INTERVENTIONS

LAETOLI PROJECT AUGUST 1995 G2/3-26
ROOT DAMAGE AND INSECT ACTIVITY



### Location

Southern sector of trackway, trench 1.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995

# 1978-1979 Description

Particularly well preserved dual right footprints with drag marks in front of G-2.

## 1995 Condition

General Condition: Minor alteration: Good

## Tuff conditions:

Weathering: none

<u>Cracking</u>: Network of fine cracks, <1mm wide, in tuff underneath deteriorated Bedacryl in anterior and posterior portions.

Losses: Minor surface abrasion on rim of termite tunnel outside posterior medial print margin.

Detached/loose tuff: none

Powdering: none Other: none

Conditions related to 1978-79 interventions:

<u>Bedacryl</u>: Bedacryl covered the print and the tuff surrounding it. The Bedacryl was deteriorated at the bottom of the anterior half and deteriorated and partially lost near the posterior margin. The Bedacryl layer was relatively thick.

Embedding: Slight embedding of fine particles in the Bedacryl layer, especially in the deteriorated

areas.

Silicone: none

Excavation tool marks: Not visible due to Bedacryl layer (see Comparison below)

Inventory number on tuff: 1979 label ("2-27") visible on tuff surface beyond the heel margin.

Other: none

Root damage: Extensive network of rootlets (shown on graphic as root mat) weaved in and out of the Bedacryl layer especially in the areas where the Bedacryl was deteriorating (anterior half and posterior margin), but did not appear to penetrate the tuff.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Surface rootlets were removed. Where fine rootlets had worked their way into the Bedacryl layer and were well adhered, they could not be removed without risking loss of Bedacryl and were, therefore, left.

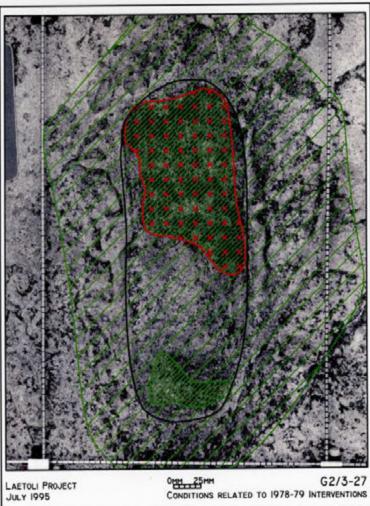
Other: none

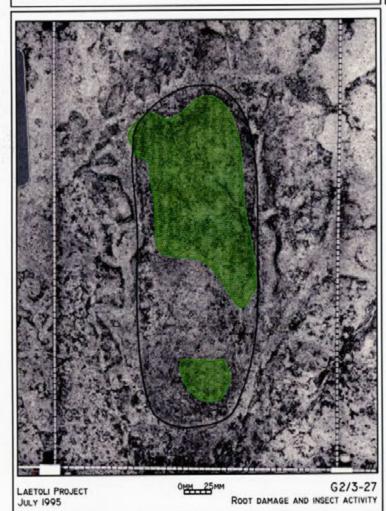
Comparison with 1978-79 Cast/Photograph

Comparison with 1979 cast and photos showed loss of resolution of features due to the thick layer of Bedacryl, especially the deteriorated areas. Excavation tool marks, which can be seen to cover the floor of the print in cast and photos, are obscured in situ. A crack in the anterior portion is less distinct in situ.

Notes
The field cast showed several surface irregularities, which were related to the repairs of the master mold, carried out in 1995.









G2/3-27 CONTOUR MAP

#### Location

Southern sector of trackway, trench 1.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995

## 1978-1979 Description

Left footprints in similar condition to 2/3-27, also with a scuffmark in front of the G-2 print.

## 1995 Condition

General Condition: Minor alteration: Good

## Tuff conditions:

Weathering: none

Cracking: A crack with a calcite vein traversed the anterior and central portion of the prints.

Minor cracks in the tuff along prints' margin.

Losses: Minor loss of the tuff surface where Bedacryl had deteriorated near center of medial margin.

Detached/loose tuff: none

Powdering: none Other: none

Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout the prints and surrounding tuff; patches of Bedacryl on the floor and medial margin of the prints had begun to deteriorate and crack with minor areas of loss, exposing a lighter colored tuff underneath.

Embedding: Fine particles from the overburden adhered to Bedacryl layer, especially on the floor

of the print.

Silicone: Traces of silicone on anterior margin.

Excavation tool marks: none

Inventory number on tuff: 1979 label ("2-28") visible on tuff surface beyond the heel margin.

Other: none

Root damage: Tiny rootlets weaved in and out of the Bedacryl layer, and two roots, approximately 1-2mm in diameter, penetrated the tuff on the anterior portion, without causing damage or disruption of the tuff.

Insect activity: none

## 1996 Interventions

Consolidation/stabilization: none

Fills: none

Reattachment: none

Root treatment: Surface rootlets removed.

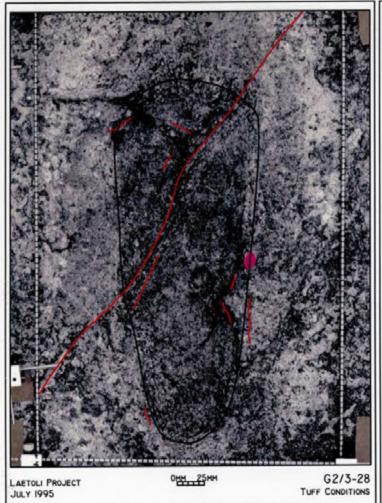
Other: none

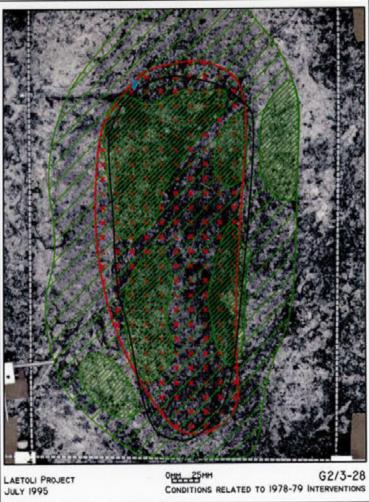
Comparison with 1978-79 Cast/Photograph

Comparison with 1979 cast and photos showed slight loss of resolution of fine details on the print surface due to the layer of Bedacryl and particle embedding in that layer. The calcite vein that traversed the print was clearly visible in the cast and in photographs.

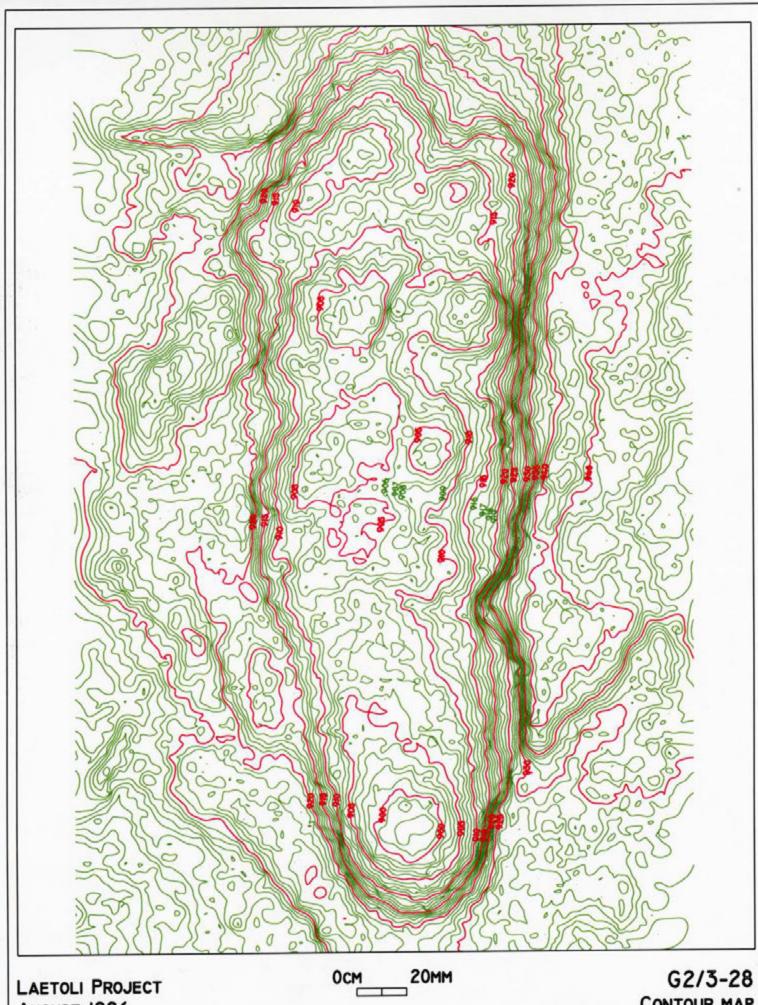
#### Notes

The field cast showed surface irregularities between G2/3-27 and G2/3-28 that are related to the repairs of the master mold carried out in 1995 from which the field cast was made. 1979 photo shows purported third print using shadow outline technique.









AUGUST 1996

## Location

Southern sector of trackway, trench 1.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995

## 1978-1979 Description

Less well preserved dual right footprints. The toe impressions are not defined in either print.

## 1995 Condition

General Condition: Minor alteration: Good

## Tuff conditions:

Weathering: none

Cracking: none

Losses: none

Detached/loose tuff: Small fragment of detached tuff outside anterior print margin.

Powdering: none Other: none

## Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl detected throughout the prints and surrounding tuff. Deteriorated patches on

floor of prints. Bedacryl had been applied thickly and was cracked.

Embedding: Moderate embedding of fine particles adhered to Bedacryl layer within prints' margins and in low points of the surrounding tuff.

Silicone: Traces of silicone outside anterior margin of prints.

Excavation tool marks: Not visible due to Bedacryl layer (see Comparison below)

Inventory number on tuff: none

Other: none

Root damage: Numerous rootlets on surface only.

Insect activity: none

## 1996 Interventions

Consolidation/stabilization: none

Fills none

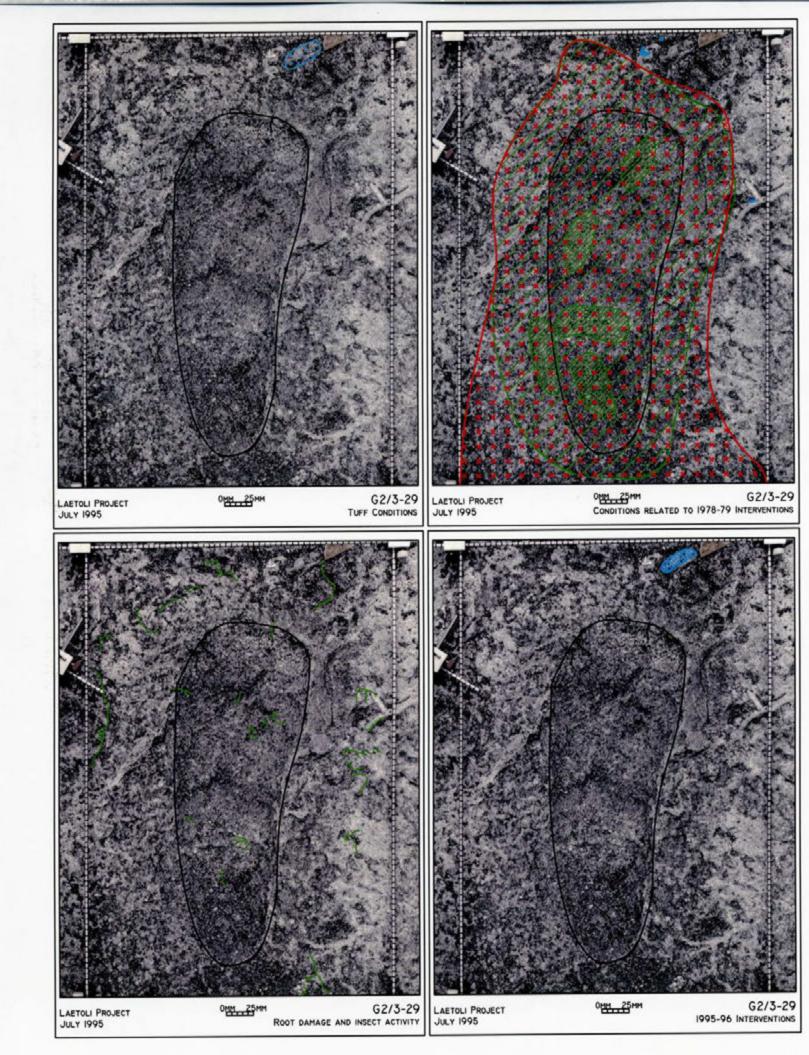
Reattachment: Loose fragment of tuff outside anterior margin reattached with Paraloid B-72.

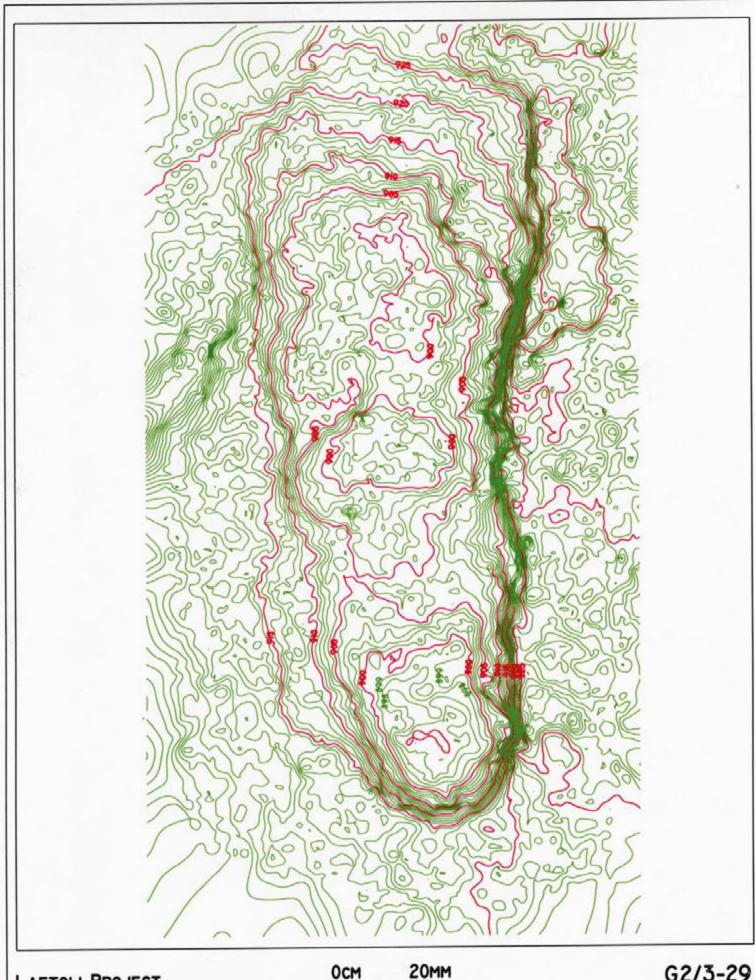
Root treatment: Surface rootlets removed.

Other: none

# Comparison with 1978-79 Cast/Photograph

Comparison with 1979 cast and photos showed loss of resolution on floor of the prints. Fine features, including tool marks clearly evident in the posterior portion of the cast, were obscured due to the thick layer of Bedacryl and fine particles of overburden embedded in the coating. Although consistently applied to all the well-preserved 1979 prints, no inventory number was visible *in situ*, nor could it be ascertained on the available photos.





0cm\_\_\_\_20mm

G2/3-29 CONTOUR MAP

## Location

Southern sector of trackway, trench 1.

# Excavation and Reburial History

Excavated and reburied in 1979; re-excavated and reburied in 1995

## 1978-1979 Description

Presumed left footprints in which the anterior part has been cut through by a small fault and is now offset by 36 mm.

# 1995 Condition

General Condition: Minor alteration: Good

## Tuff conditions:

Weathering: Slight weathering along the lateral margin and bottom of the prints.

Cracking: Hairline cracks near center of prints.

Losses: none

Detached/loose tuff: Area of tuff along fault line beyond posteromedial margin was fragile and

loose.

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl throughout prints and surrounding tuff south of the fault. Bedacryl was not identified north of the fault. The Bedacryl layer was missing outside the lateral margin and was deteriorated or missing in patches inside the prints near the center; missing Bedacryl probably removed during the molding operation in 1979.

Embedding: Moderate embedding throughout the prints and the surrounding tuff, especially in

anterior part north of fault.

Silicone: Traces of silicone outside medial margin.

Excavation tool marks: none

Inventory number on tuff: none (see Comparison)

Other: none

Root damage: Rootlets on surface; one rootlet penetrated Bedacryl layer in anterior portion.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: Loose tuff along edge of fault outside the prints' margin was stabilized with Acrysol WS-24 at 4%.

Fills: none

Reattachment: none

Root treatment: Surface rootlets were removed.

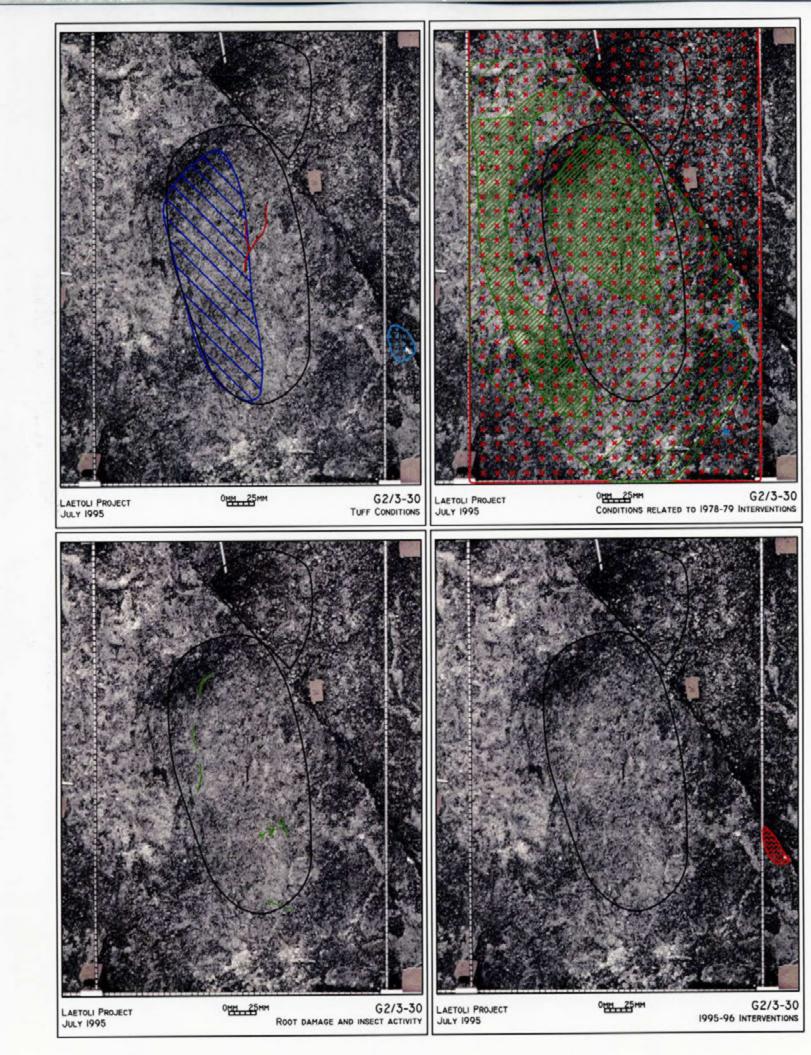
Other: none

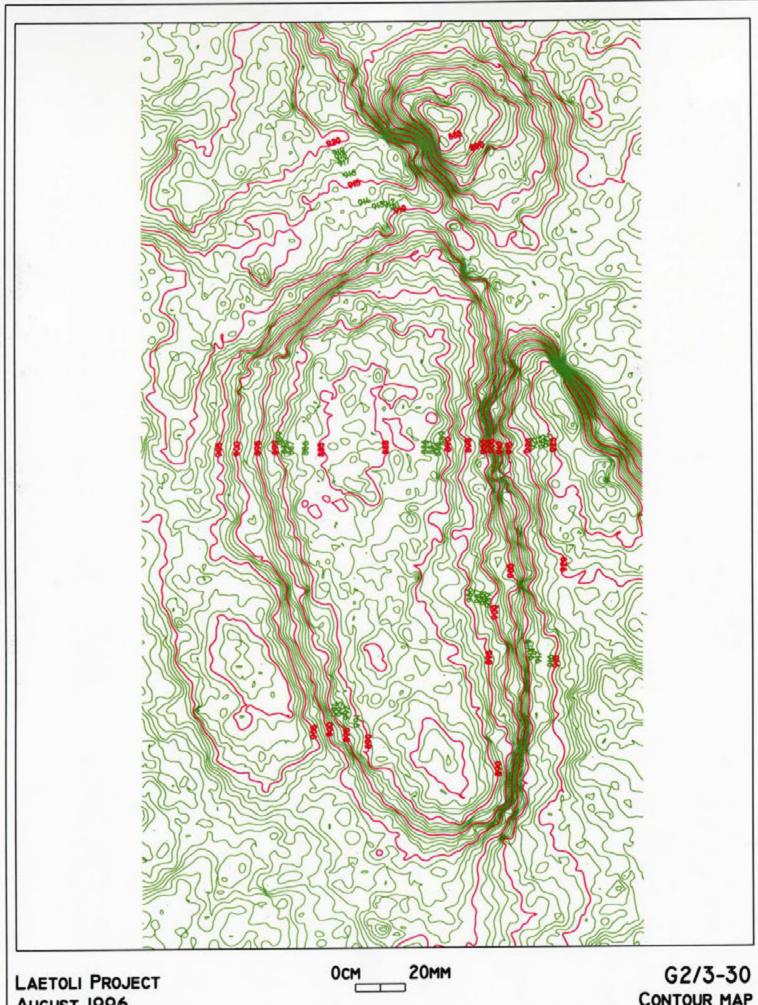
# Comparison with 1978-79 Cast/Photograph

Comparison with 1979 cast and photos showed loss of resolution of details on floor of print due to Bedacryl and fine particles embedded in the coating. Inventory number, which is visible on photos, was not seen *in situ* due to embedding.

#### Notes

The 1979 overburden and tuff in this area was very damp when excavated in 1995.





0CM\_\_\_

G2/3-30 CONTOUR MAP

## Location

Southern sector of trackway, trench 1.

# **Excavation and Reburial History**

Excavated and reburied in 1979; re-excavated and reburied in 1995

# 1978-1979 Description

The anterior part of a large print, probably representing only G-2, truncated by another small fault. From its position in the trail it is of a right foot.

## 1995 Condition

General Condition: Moderate alteration: Fair

## Tuff conditions:

Weathering: Moderate weathering of the tuff inside the print margin and extending outside margins.

Cracking: none.

Losses: Two ~1cm2 losses on the tuff surface within the print.

Detached/loose tuff: none

Powdering: none Other: none

# Conditions related to 1978-79 interventions:

Bedacryl: Bedacryl detected throughout print. It was deteriorated in all but a small patch in the

Embedding: Moderate to heavy particle embedding throughout the print and the surrounding tuff.

Silicone: Minor traces of silicone inside and outside of the print.

Excavation tool marks: none Inventory number on tuff: none

Other: none

Root damage: Rootlets concentrated on the posterior end where the print meets the higher augitebiotite tuff.

Insect activity: none

#### 1996 Interventions

Consolidation/stabilization: none

Fills: none

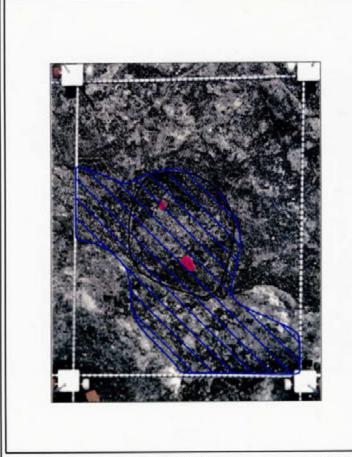
Reattachment: none

Root treatment: Surface rootlets were removed.

Other: none

# Comparison with 1978-79 Cast/Photograph

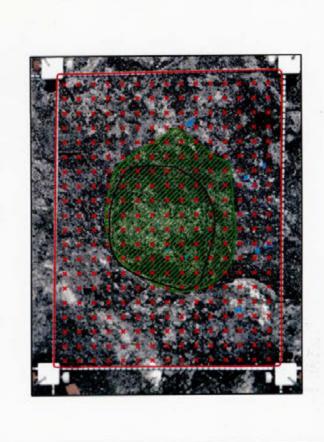
Comparison with 1979 cast and photos showed loss of resolution of details on floor of print due to Bedacryl and fine particles embedded in the coating; and an increase in weathering.





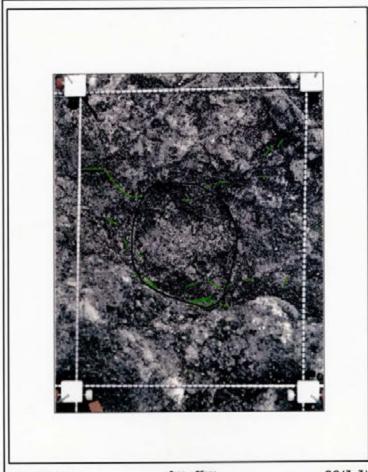


G2/3-31 TUFF CONDITIONS



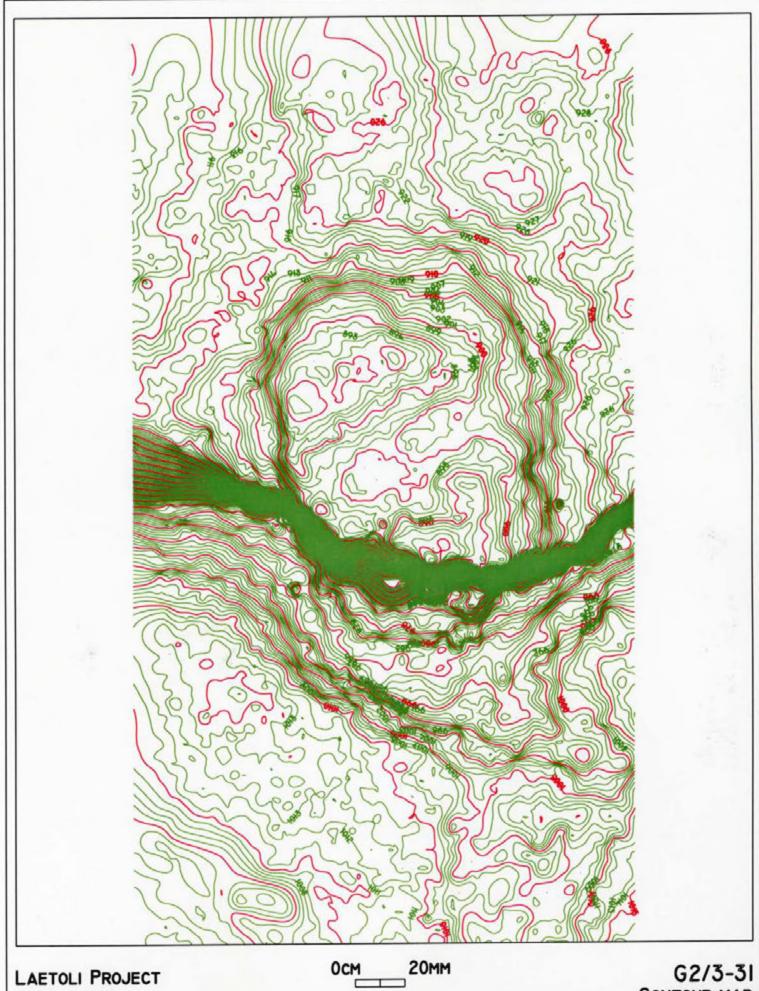
LAETOLI PROJECT JULY 1995

OMM 25MM G2/3-31 CONDITIONS RELATED TO 1978-79 INTERVENTIONS



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G2/3-31 ROOT DAMAGE AND INSECT ACTIVITY



AUGUST 1996