

## APPENDIX II

### DESIGN ANALYSIS OF LELAND INCISED POTTERY

As defined by Phillips (1970), the type, Leland Incised, is characterized by a wide variety of decorative designs. It is clear from the literature that little is known about these designs, and the analysis which is described in the following pages represents an attempt to rectify this situation. The goal of the study has been the identification and definition of all designs characteristic of Leland Incised. The motivation for the study has been the belief that such designs have chronological and cultural significance, and, hence, should be taken into account in pottery classification.

This study is based on a sample of over 200 whole and partial vessels found in museum collections and illustrated in numerous publications. All specimens were photographed with Polaroid film in order to provide a permanent record of the designs represented. The chief advantage of a photographic record lies in its accuracy and the ease with which the recorded specimens can be handled during subsequent analysis.

In the first stage of analysis, it was essential to work with complete designs found on whole or nearly whole vessels. Once a beginning had been made in the

formulation of designs, sherds could be utilized to a limited extent. With sherds, the sample of design specimens was nearly doubled. Most designs can be recognized from quite small fragments of vessels, but in any sherd collection, the majority of Leland Incised specimens will be unidentifiable as to design.

The analysis has met with only partial success. A total of seven distinct designs have been defined, but the changes they undergo through time are not fully clear in all cases. The major obstacle has been the lack of a large sample of whole vessels with adequate provenience data. At least one third of the sample utilized in the analysis has no provenience beyond generalized locations such as Louisiana, or Natchez, Mississippi. Even in cases where detailed descriptions of site investigations have been published, provenience data is frequently inadequate. Cotter's 1948 excavation at the Anna site (26-L-1) is a case in point. Cotter excavated a test trench into Mound 5 and obtained a number of whole vessels which he illustrated in the published report (1951) alongside vessels obtained from the mound in earlier excavations by the site owner. The mound is a multi-stage structure and is known to represent a considerable span of time. Some vessels illustrated by Cotter (especially Fig. 20, 1) appear to be

considerably later than others (Fig. 22, 1-3). Yet all illustrated vessels are described only as coming from the top ten feet of the mound.

In the following pages, the seven Leland Incised designs are described and temporal variations, where recognized, are detailed. Specimens of each design variation in the author's photographic collection are listed along with data on archaeological provenience and present location. The section is closed with a discussion of the implications of the analysis for present classifications of Leland Incised. Suggestions for improving these classifications are offered.

#### Design A (Fig. 78, Table 56)

Two Leland Incised designs, Designs A and B, utilize the scroll as their basic motif. In both, interlocking scrolls are placed around vessel circumference in one or two rows; and between two and five scroll arms radiate out from each scroll axis to adjacent axes.<sup>1</sup> Design A is distinctive in that the vessel neck or rim and vessel base are treated as scroll axes; scroll arms radiate out from them to adjacent axes incised on the body of the vessel (see Cotter, 1951:Fig. 22, 1a). As a result,

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<sup>1</sup>The terms, "scroll arm" and "axis," have been coined to describe respectively, the lines radiating out from the center of the scroll and the center of the scroll itself.

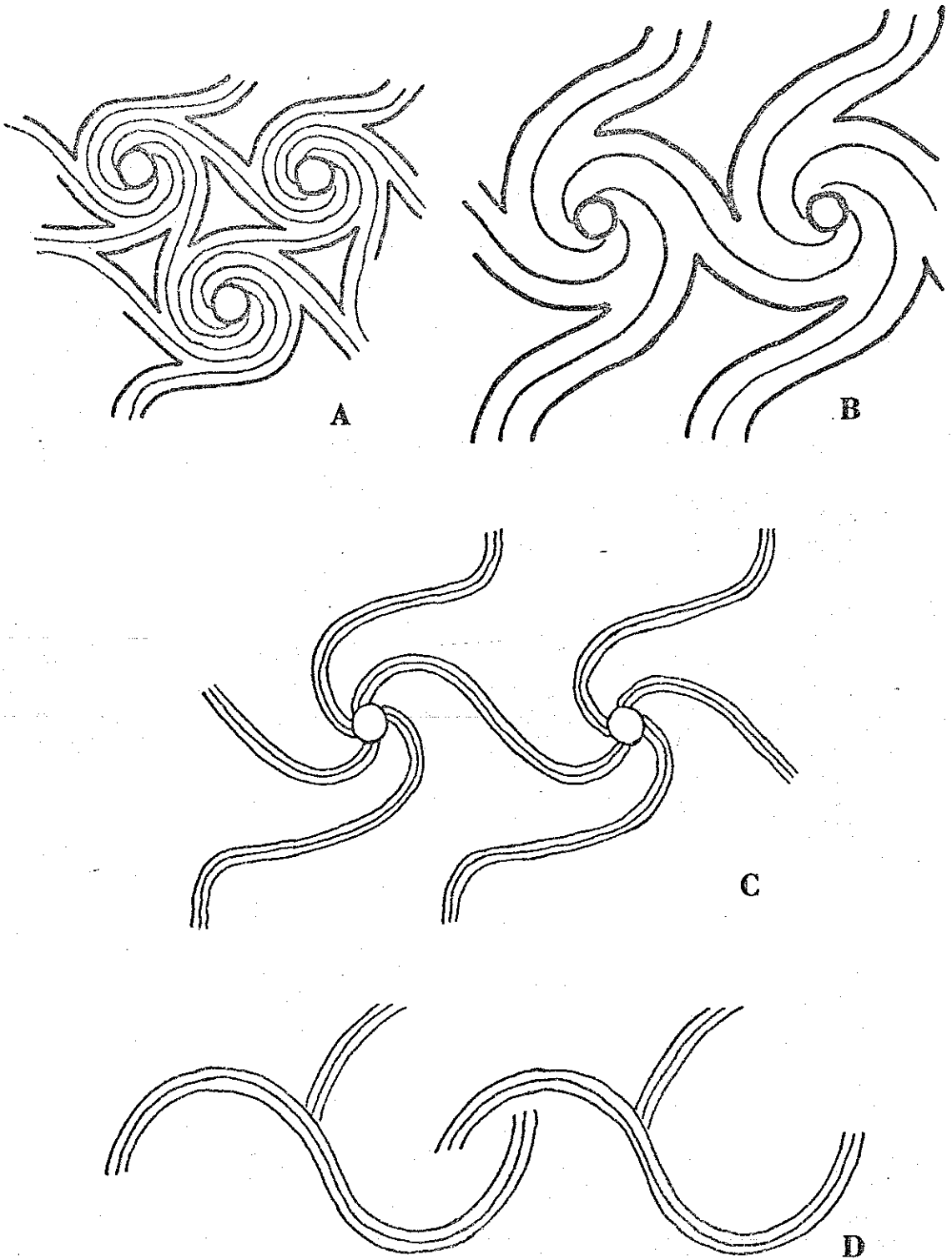


Fig. 78.--Leland Incised, Design A

TABLE 56

## PROVENIENCE OF DESIGN A SPECIMENS USED IN ANALYSIS

Stage I

Burroughs	22-M-10	LMS Collection, Peabody Museum.
Peaster Place	20-0-18	Moore, 1908:Fig. 2.
Haynes Bluff	22-M-5	MacPherson Collection, North Museum, Franklin and Marshall College.
Brumfield	YZ-4	LSU Collection.
Ferris	23-M-3	Phillips, 1970:106.
Routh	24-L-7	LMS Collection, Peabody Museum.
Menard	17-K-1	Moore, 1908:Figs. 8, 11.
Gordon	26-L-2	Cotter Collection, Ocmulgee National Monument.
Swift		Plate III, a. U. S. National Museum, Cat. No. 8644.
Swift		Plate III, b. Holmes, 1903: 51, d.
Anna	26-K-1	Cotter 1951:Figs. 22, 1, 3; Fig. 24, 4.
Glass	24-M-2	Moore 1911:Fig. 9.
Lake George	21-N-1	Phillips, 1970:104.
Baptiste	28-H-10	LSU Collection.
Near Natchez		Brown 1926:Fig. 339.
Near Natchez		Joseph Jones Collection, Heye Foundation.

Stage II

Transylvania	22-L-2	Plate IX, j.
Emerald	26-L-1	Cotter Collection, Ocmulgee National Monument.
Beasley	24-L-14	LMS Collection, Peabody Museum.
Burthe	24-M-6	Clausen Collection, American Museum of Natural History, Cat. No. 20.2/3797
Fatherland	26-K-2	Neitzel 1965:Fig. 19, m.
Angola Farms	29-J-2	LSU Collections.
Glendora	22-H-3	Moore Collection, Heye Foundation.
Smith		Mississippi State Historical Museum, Cat. No. 63096.

TABLE 56 (Continued)

Stage III

MLe 14		Jennings 1941:Plate 6, h; and collections at Ocmulgee National Monument.
Fatherland	26-K-2	Neitzel 1965:Fig. 19, c, d, i, j, l, n, o, p; Plate 10, u.
Burthe	24-M-6	MacPherson Collection, North Museum, Franklin and Marshall College. Two vessels.
Natchez Fort Mississippi	25-J-3	LSU collections. Mississippi State Historical Museum, Cat. No. 61.828.
Mississippi		Dickeson collection, University Museum, Cat. No. 14163.
Adams Co. Mississippi		Brown, 1926:Fig. 341.

the interlocking scroll motif covers the entire vessel surface. Except in the latest specimens, scroll arms are accompanied by border lines that set them off from the undecorated vessel surface lying between scrolls (Fig. 78, a, b). Scroll arms may consist of from one to three lines. By the historic period they are carried out almost exclusively in three lines. Borders are apparently always formed with a single line.

Design A has a wide distribution in the Lower Mississippi Valley. The great majority of known examples come from sites east of the Mississippi River in the area between Vicksburg and Natchez. Presumably, it is also common in the Lower Yazoo and Upper Tensas basins. Additional specimens are known from Menard, Jennings' Chickasaw sites in Lee County, Mississippi (MLe 90, Mle 14), Keno (22-H-5), Glendora (22-H-3), Angola Farm (29-J-2), and Peter Hill (31-K-2). Chronologically, the design extends from Routh phase to latest historic as represented by the Lee County sites.

It is possible to distinguish three developmental stages in the history of Design A.<sup>1</sup>

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<sup>1</sup>These stages chronologically overlap to some extent. Vessels with early and middle stage designs are found together at some sites (specifically Emerald), and vessels with middle and late stage designs are found together at others (Fatherland, for example).

Stage 1 (Fig. 78, a, b). In terms of the Upper Tensas Basin phase sequence, this stage encompasses Routh and the first half of Fitzhugh phase. The following are characteristics of the design in this first stage:

1. Scrolls occur in either one or two rows.
2. Scroll arms are paralleled on each side by a single border line.
3. Scroll axes are represented by incised circles. In the one exception (Cotter, 1951:Fig. 21, 4), the circular axis is formed by the intertwining of scroll arms.
4. Both vessel neck or rim and vessel base are included in the design as scrolls.
5. Frequently border lines are broader than the lines of the scroll arms and therefore stand out clearly.
6. Scroll arms frequently circle half way or more around the scroll axis before terminating. When this occurs and each scroll arm consists of two or three lines, the scroll axis is encircled by a broad band of lines. This is apparently the characteristic upon which Phillips (1970:106-7) has based his definition of Leland Incised, var. Ferris.
7. Spacing between lines of the scroll arms and borders is quite uniform.
8. Vessel shapes include the bottle and pedestaled bowl.
9. Execution is usually quite fine. Incised lines tend to be rather broad and polished. The entire design is laid out with incredible precision.

Stage 2 (Fig. 78, c). This stage is primarily prehistoric and can be equated with late Fitzhugh and



Transylvania phases. Definition is based on pottery from Transylvania and Emerald sites. The following are characteristics of the design at this intermediate stage of development:

1. Scrolls occur in only a single row.
2. Border lines do not occur.
3. Occasionally, vessel base is not included in the design; that is, there is no scroll arm leading to it.
4. Vessel shapes are the bottle, and probably the pedestaled and rounded bowl.

Stage 3 (Fig. 78, d). This stage is exclusively historic. Definition is based on the burial pottery from Mound C, Fatherland and the Lee County Chickasaw sites. The following are characteristics of the design in its final stage of development:

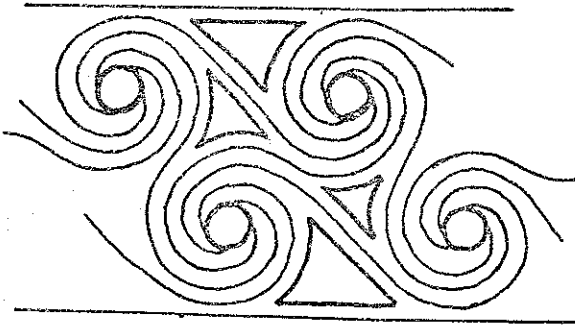
1. Border lines are absent.
2. Vessel base is seldom included in the design.
3. Vessel shape is predominantly, if not exclusively, that of the rounded or pedestaled bowl.
4. The scroll axis frequently consists of only interlocking scroll arms.
5. The scroll arms that extend upward toward vessel rim (and occasionally downward toward vessel base) do not radiate out from the scroll axes, but rather from the scroll arms connecting axes. They are short and frequently lack the double curve characteristic of the earlier stages.

6. Scroll arms usually consist of three lines.

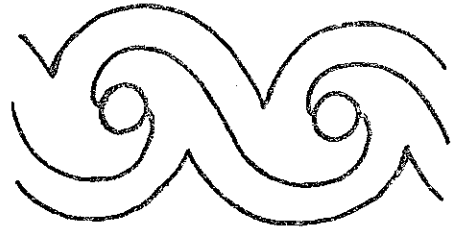
In the historic period, Design A has clearly degenerated from its earlier forms. The majority of Leland Incised varieties recognized by Phillips (1970) bear Design A among others, the exceptions being Blanchard and Deep Bayou. Vessels with Design A decoration have been classified as Fatherland Incised by Cotter (1951:Fig. 21, 4; Fig. 22, 1, 3), Ford (1961:Fig. 17, f), and Neitzel (1965: Fig. 19, c, d, i, j, l-p); as Natchez Incised by Neitzel (1965:Plate 10, u) and Ford (1961:Fig. 17, d); as Bayou Goula Incised by Neitzel (1965:Plate 1, ee); as Leland variety by Phillips (1970); and as Ferris variety by Phillips (1970).

Design B (Fig. 79, Table 57)

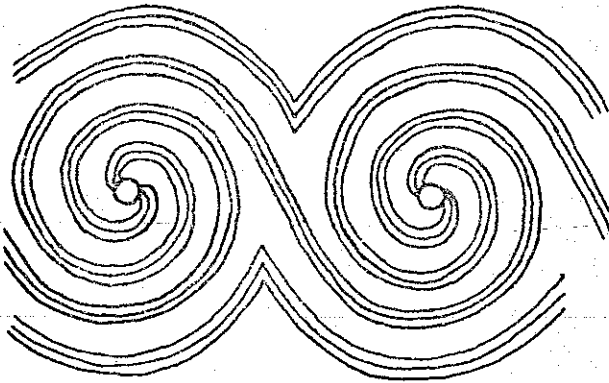
Design B differs from Design A in that no scroll arms extend to the vessel neck or base. Rather, the design is confined to a portion of the vessel surface by borders that consist of either scallop lines, or a combination of straight lines and triangular fillers. When scrolls occur in two rows there are filler elements within the design between scrolls. Border and fillers are analogous to the border lines characteristic of Design A, in that they always parallel the scroll arms. Border lines defining the field of decoration persist throughout the history of the design. Unlike Design A,



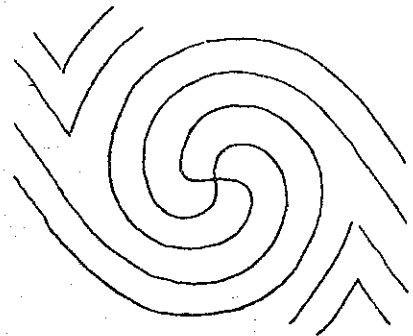
A



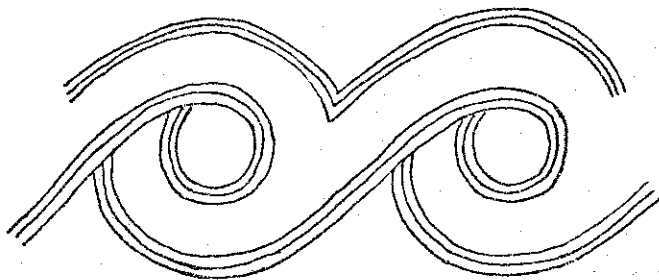
B



C



D



E

Fig. 79.--Leland Incised, Design B

TABLE 57

## PROVENIENCE OF DESIGN B SPECIMENS USED IN ANALYSIS

Stage I

Glass	24-M-2	Moore 1911:Figs. 8 and 11.
Glass	24-M-2	Moore collection, Peabody Museum, Cat. No. 81129.
Swift		Swift collection, U. S. National Museum, Cat. No. 8622.
Brumfield	YZ44	LSU collection.
Gross	20-0-?	Mississippi State Historical Museum, Cat. No. 60521.
Sanson	27-H-10	Webb collection, Shreveport, La.
Glendora	22-H-3	Moore, 1908:Fig. 80.
Canebrake	24-J-9	Moore 1913:Fig. 20.
Louisiana		Holmes 1903:Plate 51, a.

Stage II

Transylvania	22-L-3	LMS collection, Cut 10, Level B.
Fatherland	26-K-2	Neitzel 1965:Fig. 19, f, k; Fig. 20, d-1, n.
Canebrake Smith	24-J-9	Moore 1913:Fig. 23. Mississippi State Historical Museum, Cat. No. 60526.
Ring	24-M-5	Mississippi State Historical Museum, Cat. Nos. 60522, 60523.
Emerald	26-L-1	Cotter collection, Ocmulgee National Monument, Moorehead collection, Andover Academy.
Burthe	24-M-6	Clausen collection, American Museum of Natural History, Cat. No. 20.2/1592.
Angola Farm	29-J-2	Ford 1936:Fig. 27, c.
Neeley's Ferry	11-N-4	Peabody Museum collection, Cat. No. 21117.
Lake Washington, Mississippi Adams Co. Mississippi Tillar	17-J-1	Daniel, 1876:Fig. 87.  Brown 1926:Fig. 340. Gilcrease Museum, Cat. Nos. V1688, V1711, V1712.
No provenience		Dickeson collection, University Museum, Cat. Nos. 14098, 14191 and 14213; Culin, 1900: Plate 14.

TABLE 57 (Continued)

No provenience no provenience		Holmes 1903:Fig. 49. MacPherson Collection, North Museum, Franklin and Marshall College.
Burthe	24-M-6	MacPherson Collection, North Museum, Franklin and Marshall College.

Stage III

Laborde Place	28-H-11	Moore 1912:Fig. 11.
Fatherland	26-K-2	Neitzel 1965:Fig. 19H, Fig. 20, c.
Ratcliffe Mound, Mississippi		Moorehead 1932:Fig. 101a.
Bayou Goula	32-L-1	Quimby 1942:Plate 13, 5.

borders usually consist of multiple lines, usually the same number as comprise each scroll arm. When scroll arm and border consist of two or three lines each, spacing between each element, border and scroll arm, is greater than that between lines forming each element. In the few known examples where scroll arms and borders are carried out with only a single line, spacing is very uniform. A few specimens with border and scroll arms consisting of two lines also have this characteristic. With four known exceptions, scroll axes are represented by an incised circle. The exceptions, Fatherland, Angola Farm, Glass, and Glendora, have axes formed by the intersection of scroll arms. This feature apparently persists throughout the entire history of the design. The bottle form is the predominant vessel shape throughout the history of the design; pedestaled bowls and simple bowls are relatively infrequent.

Design B has essentially the same chronological and spatial distribution as Design A. There are no known examples from Menard (17-K-1), but specimens do occur at Tillar (17-J-1), and it is probable that the design is found throughout southeast Arkansas. Quimby (1942: Plate 13, 5) illustrates an example from Bayou Goula (32-L-1).

Three developmental stages can be recognized in the history of Design B. They parallel those of Design A fairly closely.

Stage 1 (Fig. 79, a, b). Stage 1 is to be equated with at least the first half of Fitzhugh phase. No examples occur in the rather limited sample of identifiable designs from Routh phase sites, but presumably, the design is present at that time. Examples are known for Swift, Brumfield, Canebrake, Glass, Sanson, and Glendora. The following features are characteristic of the design in this first stage:

1. Scrolls occur in either one or two rows.
2. When scrolls occur in two rows, triangular fillers occupy the spaces between scroll axes.
3. There is one known example (Holmes 1903:Plate 51, a) in which scroll arms encircle the scroll axis to such an extent as to produce the characteristic appearance of Ferris. Presumably, it is more common.
4. In one known specimen (Holmes 1903:Plate 51, a), border and triangular filler lines are broader than the lines of the scroll arms.
5. Scroll arms and borders are usually executed with one line.<sup>1</sup>

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<sup>1</sup>In two instances, Canebrake (Moore 1913:Fig. 20) and Glass (Moore 1911:Fig. 8), these elements are carried out with three close spaced lines. On this criteria, these two vessels would be Stage II, but, with two rows of scrolls and triangular fillers, they qualify as Stage I. This kind of problem is discussed on pg. 749.

6. When decoration is carried out by a single line, spacing between lines of the scroll arm and border is quite uniform.
7. Scroll axes are represented either by incised circles or the intersection of scroll arms.
8. Execution is good. Incised lines tend to be broad and polished, and the designs are laid out with precision.

Stage 2 (Fig. 79, c). This stage equates with late Fitzhugh, Transylvania and the historic phases in the Upper Tensas Basin. Examples are known from Emerald, Transylvania, Fatherland, Ring, Glendora, and Angola Farm. The stage has the following characteristics:

1. Scrolls occur exclusively in a single row.
2. Scroll axes are predominantly incised circles, but also are formed by the intersection of scroll arms.
3. Scroll arms consist almost exclusively of three lines.
4. Borders consist of either one, two, or three lines.
5. Occasionally, there is no border line paralleling the scroll arms below.
6. There is a tendency for scroll arms to encircle scroll axes more than in the earlier stage. The extreme development is seen in bottles from Fatherland, Emerald, and Transylvania, in which there are four scrolls evenly spaced around the vessel circumference, and scroll arms completely encircle the axis one to two times. In this form, each scroll occupies almost an entire quarter of the vessel surface.



Stage 3 (Fig. 79, e). This stage is a direct parallel of the final stage in Design A. It is, however, not common in the available collections, being known for only three sites: Fatherland, Bayou Goula, and Laborde. The main characteristic is the absence of an incised circle for the scroll axis. Scroll axis is defined by the intertwining of scroll arms.

All Leland Incised varieties, with the exception of Blanchard and Deep Bayou, bear Design B in addition to others. Vessels with Design B have been classified as Fatherland Incised by Neitzel (1965:Fig. 19, f, k; Fig. 20, c-k) and Quimby (1942:Plate 13, J; Plate 14, 4); and as Natchez Incised by Neitzel (1965:Fig. 20, n). There is one vessel from Tillar with punctations in the scroll arms. This would normally be classified as Owens Punctated.

#### Design C (Fig. 80, a-c, Table 58)

The basic constituents of this design are: 1) a pair of lines forming a continuous series of S-shaped curves around vessel circumference; 2) two scallop border lines and; 3) incised circles placed within the curves of each "S". In terms of what is being portrayed, this design should probably be seen as two sets of interlocking hook-shaped elements, each of which is defined by a meandering line. Within each hook-shaped element,

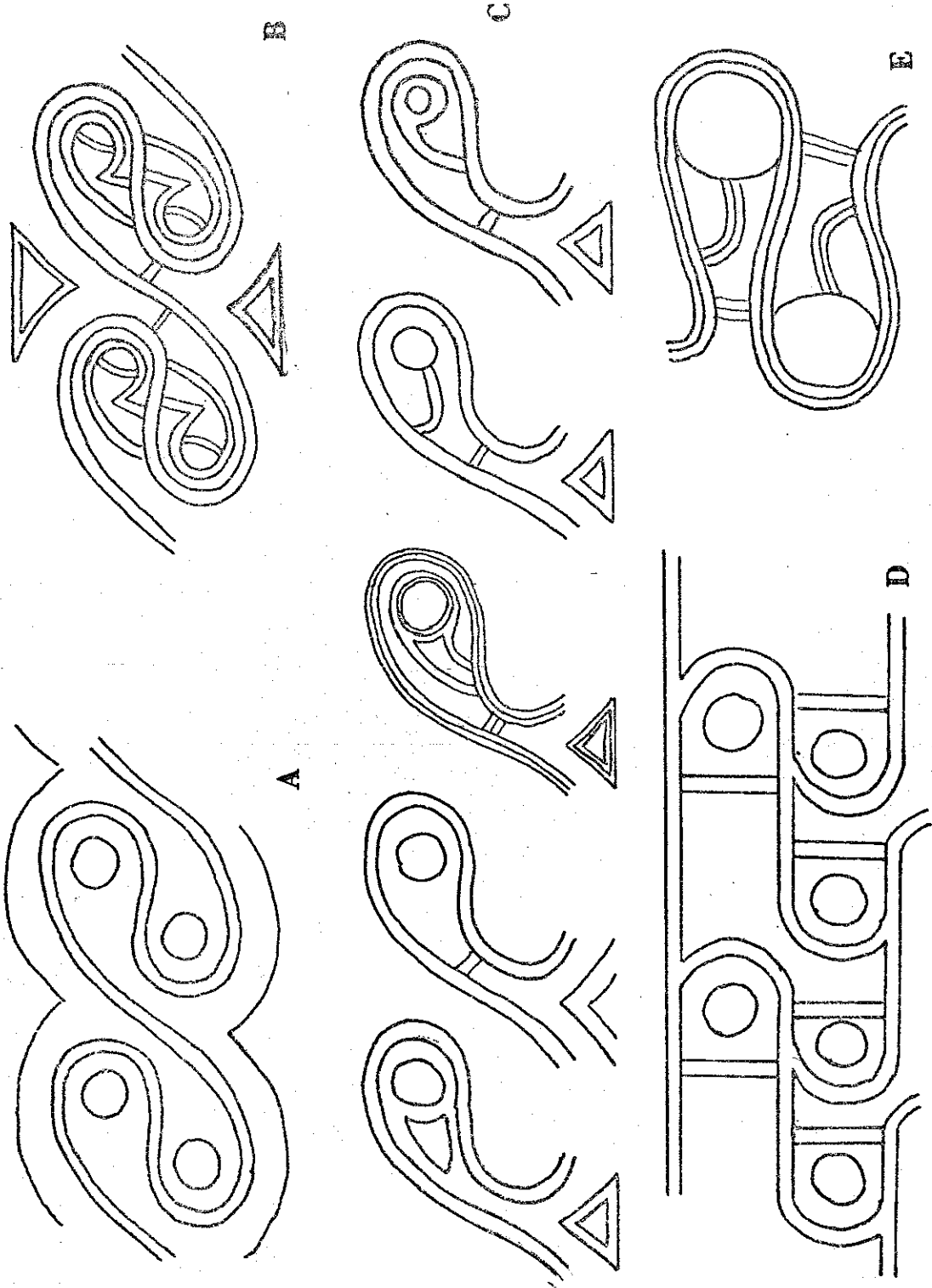


Fig. 80.--Leland Incised, Designs C and D

TABLE 58

## PROVENIENCE OF DESIGN C SPECIMENS USED IN ANALYSIS

Plain Circle Variety

Routh	24-L-7	LMS Collection, Peabody Museum.
Neblett Land- ing	18-L-1	Moore 1911:Fig. 19.
Gordon	26-L-2	Cotter Collection, Ocmulgee National Monument.
Anna	26-K-1	Webb Collection, Shreveport, Louisiana.
Menard	17-K-1	Moore 1908:Fig. 10 and 18.
Emerald	26-L-1	Cotter Collection, Ocmulgee National Monument.
Smith		Mississippi State Historical Museum, Cat. Nos. 60525, 61799, 61819.
Woodward	Ra 5	LSU Collection.
Ward	21-I-5	Moore 1909:Fig. 161.
Stoneville	19-M-3	E. Palmer Collection, U. S. National Museum, Cat. No. 82476.
Lake Washington, Mississippi		Wilson, 1876:Fig. 87.
Burthe	24-M-6	MacPherson Collection, North Museum, Franklin and Marshall College.
Bear Point Mound		Holmes, 1903:Plate 56.
Ross Co. Ohio		Holmes 1903:Plate 16, 1.
Baptiste	28-H-10	LSU Collection.

Complex Design Variety

Anna	26-K-1	Cotter 1951:Fig. 20, 1-3.
Emerald	26-L-1	Heye Foundation, Cat. No. 7891.
Emerald	26-L-1	Moorehead 1932:Fig. 101, b.
Fatherland	26-K-2	Neitzel 1965:Fig. 20, a, b.
Glendora	22-H-3	Moore Collection, Heye Foundation, Cat. No. 17/4602.
Keno	22-H-5	Moore Collection, Peabody Museum, Cat. No. 74749, 74748.
Oliver	16-N-6	Peabody Museum, Cat. No. 64267.
Moundville		McKenzie (1966:Fig. 8d.
No provenience		Culin:1900:Plate 15.
No provenience		Holmes 1903:Fig. 51, d.

a number of different elements may occur as illustrated in Fig. 80, c.

There is some indication of temporal priority for the design in which plain circles are the only element within the hook-shaped areas. The only definitely late sites with this form of the design are Burthe and Lake Washington. The more elaborate variations are well represented at historic and late prehistoric sites, but occur also at Anna. One vessel illustrated by Cotter (1951:Fig. 20, 1) from Anna, Mound 5, is so similar to a vessel from the historic burials in Mound C, Fatherland Site (Neitzel 1965:Fig. 20, a), that they could have been made by the same potter. Stratigraphic context indicates that these vessels should be several hundred years apart in time. The number of examples of Design C is rather small. Until a larger sample with good provenience data is available for study, it must be concluded that the design undergoes no noticeable change from Routh phase through the historic period.

Frequently an additional line is incised in the space between the two meandering lines that define hook-shaped elements. Vessels with this design variation have been classified as Fatherland Incised by Neitzel (1965: Fig. 20, a, b), Cotter (1951:Fig. 20, 1, 3), and Ford (1961:Fig. 17, e). When only the paired lines occur,

archaeologists have identified the design as Natchez Incised (Cotter 1951:Fig. 20,2). Cross hatching and punctation are occasionally used to contrast adjacent design elements. Ford classifies a vessel with punctation from Menard as Owens Punctate (1961:Fig. 16, n). Cross hatched examples, which qualify as Maddox Engraved, are known from Emerald, Keno, and Woodward. Either the meandering band or the interlocking hooks are roughened with punctations or cross hatching.

Design D (Fig. 80, d, e, Table 59)

This design is similar to Design C in all characteristics except one: the paired meandering lines are not continuous around the vessel. Rather, the entire decorative field is broken up into a number of separate design units in which the meandering lines run from the top to the bottom of the decorative field. There is no scallop border line as in Design C, but rectangular and triangular fillers do occur occasionally within the decorative field between design units. The inventory of elements placed in the hook-shaped areas is essentially the same as that for Design C (Fig. 80, c).

There is some evidence that Design D undergoes at least one major change during its history. In vessels from Glass, Oak Bend Landing, and Menard, the hook-shaped elements from adjacent design units are nested together

TABLE 59

## PROVENIENCE OF DESIGN D SPECIMENS USED IN ANALYSIS

Early Variant

Oak Bend Landing	24-M-7	Moore 1911:Fig. 5.
Glass	24-M-2	Moore 1911:Fig. 7.
Menard	17-K-1	Moore 1908:Fig. 19.
Menard	17-K-1	Phillips photo collection, No. 463.

Late Variant

Oak Bend Landing	24-M-7	Moore collection, Heye Foundation, Cat. No. 18/471.
Emerald	26-1-1	Cotter 1951:Fig. 16, 5-6.
Burthe	24-M-6	Macpherson collection, North Museum, Franklin and Marshall College.
Ward Place	21-I-5	Moore 1908:Fig. 164.
Seven Pines Landing	21-I-4	Moore 1909:Fig. 173.
Keno	22-H-5	Moore 1909:Fig. 154.
Keno	22-H-5	Moore collection, Peabody Museum, Cat. No. 74762.
Glendora	22-H-3	Moore 1909:Fig. 58, 62, 72.
Glendora	22-H-3	Moore collection, Peabody Museum, Cat. No. 74784.
Glendora	22-H-3	Moore collection, Heye Foundation, Cat. Nos. 173468, 173469.
No provenience		Dickeson collection, University Museum, Cat. No. 14182.
Transylvania	22-L-3	LMS collection, Cut 9, Level B.

(Fig. 80, d). This does not occur in specimens from later sites such as Burthe, Glendora, Keno, and Emerald (Fig. 80, e). These two variations are no doubt related in some way. The limited sample of specimens suggests that they are developmentally related.

As with Design C, specimens may have a third line incised in the middle of the meandering band. Ford has classified one vessel from Menard with only two lines as Natchez Incised (1961:Fig. 17, g). Apparently cross hatching and punctation are not used in this design to contrast adjacent areas as no examples of such are known. As they are used to contrast surface areas in Leland Incised, cross hatching and punctation seem to require a symmetry of design that is not present in Design D.

#### Design E (Fig. 81, a, b, Table 60)

In its basic form this design consists of two elements: a single meandering line constituting a continuous series of tight S-shaped curves around the vessel circumference; and a border line above and below. The meander is usually carried out as a single line, but in four known examples, consists of paired lines. The meandering line in some cases curls back upon itself to such a degree that the S-shaped curve becomes a pseudo-spiral. Examples of this are known only from Emerald, Pritchard Landing, Keno, and Glendora. It is quite

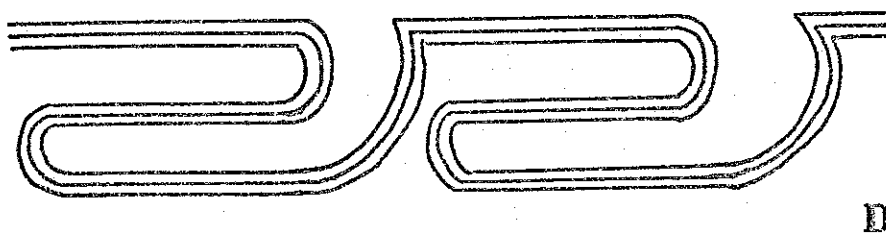
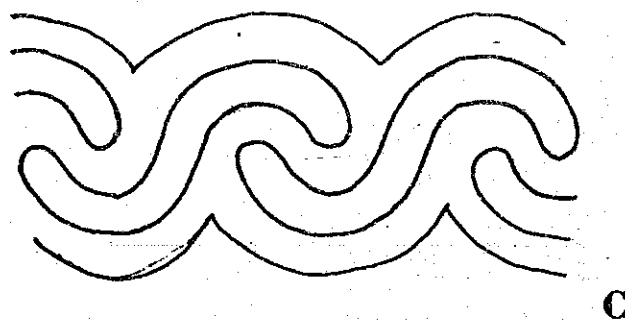
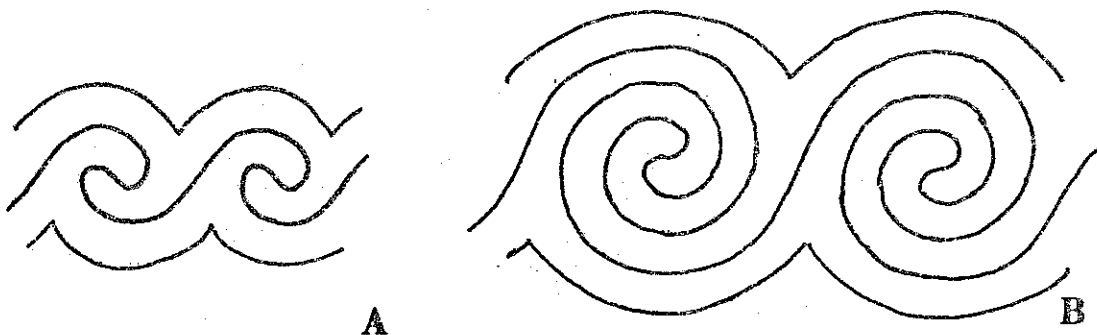


Fig. 81.--Leland Incised, Designs E, F, and G



TABLE 60

## PROVENIENCE OF DESIGN E SPECIMENS USED IN ANALYSIS

Marksville		Mound 10, Marksville, Louisiana, U. S. National Museum, Cat. No. 366472.
Emerald	26-L-1	Cotter 1951:Fig. 18, 1.
Emerald	26-L-1	Cotter collection, Ocmulgee National Monument.
Emerald	26-L-1	Heye Foundation, Cat. No. 7891.
Canebrake	24-J-9	Moore 1913:Fig. 22.
Neblett Landing	18-L-1	Moore 1911:Fig. 24.
Sanson	27-H-10	Webb collection, Shreveport, La.
Church Hill		Heye Foundation, Cat. No. 21/2808.
Chapman	23-N-1	Mississippi Historical Commission, Cat. No. 60.468.
Transylvania	21-L-2	Plate IX, g.
Burthe	24-M-6	MacPherson collection. North Museum, Franklin and Marshall College, vessel nos. 89, 97.
Fatherland	26-K-2	Neitzel 1965:Fig. 20, M; Plate 11, jj.
Pritchard Landing	25-I-2	Moore collection, Peabody Museum, Cat. Nos. 74811, 74812.
Keno	22-K-5	Moore collection, Heye Foundation, Cat. No. 17/3705.
Keno	22-K-5	Moore collection, Peabody Museum, no Cat. No.
Glendora	22-H-3	Moore 1909:Fig. 68.
Glendora	22-H-3	Moore collection, Heye Foundation, Cat. No. 17/3744.
Glendora	22-H-3	Moore collection, Peabody Museum, no Cat. No.
No provenience		Dickeson collection, University Museum, Cat. Nos. N.A. 4956, 14174, 14202.

possible that this elaboration represents a development paralleling that seen in Design B where scroll arms encircle the scroll axis up to two times before terminating.

The border line consists of either a continuous scallop line or a number of separate triangular fillers. The spacing between meander and border lines is quite uniform. As in other Leland Incised designs, cross hatching and punctuation may be used to contrast adjacent design areas. When two meandering lines occur, the intervening space between may be cross-hatched (see for example, Moore 1913:Fig. 22). With one meandering line, the space above or below it is roughened and the other left plain (see for example, Neitzel 1965:Plate 11, jj).

There are relatively few examples of this design from datable sites. It is present on the historic time level, and, with examples from Swift, it is also apparently characteristic of early Fitzhugh phase. Other than the possible late development of the pseudo-spiral variation, there is no detectable change in the design and the manner in which it is portrayed from earliest to latest occurrence.

Examples with single meandering lines have been classified as both Fatherland Incised (Cotter 1951: Fig. 16, 2; Neitzel 1965;Fig. 20, m), and Natchez Incised (Cotter 1951:Fig. 18, 1). With the addition of

cross hatching, Neitzel classifies it as Emerald Engraved (1965:Plate 11, jj). Vessels with punctation added, of which there is only one known example from Glendora cemetery (Moore 1909:Fig. 68), would presumably qualify as Owens Punctate. With the exception of three tall-necked bottles from Pritchard Landing, and one from Cane-brake, this design is found only on rounded and pedestaled bowls.

Design F (Fig. 81, c, Table 61)

There are two basic elements comprising Design F: interlocking S-shaped bands defined by paired incised lines; and border lines which parallel the interlocking bands. The entire motif is repeated around the vessel circumference. Borders are usually continuous scalloped lines, but triangular shaped fillers are known in two cases. All lines, those of the border and those defining the S-shaped bands, are evenly spaced.

Bands may be set off from surrounding vessel surface by use of cross hatching, or by the addition of incised lines within the bands. Plain and cross hatched bands occur throughout the history of the design. Incised lines within the bands are found only at Keno, Fatherland, MLe 90, and Natchez Fort, suggesting that this variation is late. Multiple line borders occur when lines are incised within the interlocking bands. Vessel shape

TABLE 61

## PROVENIENCE OF DESIGN F SPECIMENS USED IN ANALYSIS

Glass	24-M-2	Moore 1911:Fig. 10.
Emerald	26-L-1	Morehead collection, Andover Academy, Cat. No. 59710.
Emerald	26-L-1	Heye Foundation, Cat. No. 7891.
Emerald	26-L-1	Cotter collection, Ocmulgee National Monument.
Truly Place	25-L-1	Morehead collection, Andover Academy, Cat. No. 59686.
Transylvania	21-L-2	Plate III, e. Moore collection, Heye Foundation, Cat. No. 6/2172.
Burthe	24-M-6	MacPherson collection, Franklin and Marshall College, vessel Nos. 75, 109.
Fatherland	26-K-2	Neitzel 1965:Fig. 17, a, b.
Fatherland	26-K-2	Quimby 1942:Fig. 14, 2.
Pritchard Landing	25-I-2	Moore collection, Peabody Museum, Cat. No. 74810.
Keno	22-K-5	Moore 1909:Fig. 150.
Keno	22-K-5	Moore collection, Peabody Museum, Cat. Nos. 74731, 74753.
Keno	22-K-5	Moore collection, Heye Foundation, Cat. No. 17/1447.
Glendora	23-H-3	Moore collection, Peabody Museum, Cat. No. 74783.
MLe 90		Jennings, 1941:Plate 6, i.
Natchez Fort	25-J-3	Ford 1936:Fig. 13, a.
Bayou Goula	32-L-1	Quimby 1957:Fig. 41.
Baptiste	28-H-10	LSU collection.
No provenience		MacPherson collection, North Museum, Franklin and Marshall College.
No provenience		Culin 1900:Plates 14, 15, 16.
No provenience		Dickeson collection, University Museum, Cat. No. 14190.
Near Natchez		Joseph Jones field notes, Heye Foundation.

is quite variable and includes simple and pedestaled bowls, and various jar and bottle forms.

Design F is well represented at Historic and late prehistoric sites: Natchez Fort, Keno, Glendora, Fatherland, MLe 90, Burthe, Bayou Goula, and Emerald. The only presumably early Fitzhugh phase site with the design present is Glass. There is then some evidence for a somewhat restricted temporal placement of the design.

Vessels bearing Design F have been classified as Fatherland Incised by Neitzel (1965:Fig. 19, a, b) and Quimby (1942:Plate 13, 4), and as Natchez Incised by Quimby (1957:Fig. 41) and Cotter (1951:Fig. 16, 7, 8) depending upon whether or not the S-shaped bands contain additional incised lines. The cross hatched examples would presumably qualify as Maddox Engraved.

Design G (Fig. 80, d, Table 62)

This design is represented by a total of eighteen whole and partial vessels from seven sites. The design consists of a single set of paired or tripled lines that encircle vessel circumference in a series of four loops. There are no border lines. In all cases, vessel shape is that of an open bowl, either rounded or pedestaled. Bowl rim is defined by one to three close-spaced incised lines below the lip.

TABLE 62

## PROVENIENCE OF DESIGN G SPECIMENS USED IN ANALYSIS

Transylvania	21-L-2	Plate III, c, d. Moore collection, Heye Foundation, Cat. No. 6/2172.
Lake Washington	20-L-?	Wilson 1876:Fig. 87.
Fatherland	26-K-2	Neitzel 1965:Fig. 19, e, g, Plate 10, w, z.
Fatherland	26-K-2	Chambers collection, LSU.
Angola Farm	29-J-2	Quimby 1942:Plate 14, 1.
MLE 14		Jennings 1941:Plate 6, g.
MLE 14		Jennings collection, Ocmulgee National Monument.
No provenience		Dickeson collection, University Museum, Cat. Nos. 14161, 14162, 14164, 14203.

This design is found only in historic and late prehistoric sites: MLe 14, Angola Farm, Fatherland, Transylvania, and Lake Washington. Cotter illustrates a sherd from Emerald (1951:Fig. 16, 9) that may be this design. Otherwise, it is not represented in collections from that site available to the author.

Neitzel classifies examples of the design with three lines as Fatherland (1965:Fig. 18, e, g) and those with two lines as Natchez Incised (1965:Plate 10, 2).

### Discussion

Rowe (1959) has drawn attention to the differences in methods for relative pottery dating employed by archaeologists working in the New World, and those working with the classical cultures of the Mediterranean. The former utilize types, that is constellations of diagnostic attributes, as their unit of study; while the latter utilize individual attributes as indicators of relative age.<sup>1</sup> This latter method involves essentially the seriation of chronologically significant pottery attributes.

The analysis of Leland Incised designs described in the preceding pages is taxonomic (Rouse 1960) in

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<sup>1</sup>This distinction conforms to that made by Rouse (1960:313) between types and modes.

nature. The seven designs and their several developmental stages are essentially design types, each being defined by a constellation of attributes. The seven designs are properly handled as types. The delineation of design change through time, however, would seem to require a different approach. The stages outlined for certain designs, specifically Designs A and B, are essentially arbitrary slices of developmental continuums and not mutually exclusive categories. It is possible to assign some specimens to more than one stage, depending on the attributes emphasized. Changes in the designs reflect changes in their constituent attributes. Consequently, temporal change would seem more accurately recorded through a seriation of these features as advocated by Rowe. Leland Incised designs are sufficiently complex that such a technique should be applicable to them. Most of the features listed above as criteria for the identification of design stages have restricted time ranges and would qualify as "significant features" in Rowe's terminology.

To this point, discussion has centered largely upon the recognition of different designs and the changes they undergo through time. There are, however, a number of general design features that characterize Leland Incised as a whole, and these should be described in order to round out analysis of the type:



1) Decoration is limited to a specially defined area of the vessel surface. In bowls, a plain area below the lip is set off by an incised line or an actual thickening of the rim. Decoration terminates at or below this line. In jars and bottles, the junction of neck and shoulder serves as upper border, and there is usually an incised line to mark this point. The bottom of the decorative zone seems to be less rigorously defined. In pedestaled bowls, jars, and bottles, the junction of pedestal and vessel body serves as the border and may be marked by a line. Occasionally, however, decoration will extend down onto the pedestal. In round bottomed vessels, decoration stops some distance above vessel base, there being frequently an incised line to mark this point. The use of an incised line for the lower border in all vessel shapes seems to be less frequent in later times.

2) The decoration of all Leland Incised pottery consists of a single, complex design unit that is repeated around the vessel circumference. Most frequently, units are repeated four times. Since numerous examples are known in which units are repeated five or six times, it is unlikely that there is a single rule guiding the potter in this matter. In all designs, except D, these units are linked together in a continuous chain around the vessel. In Designs A and B for example, the units are interlocking scrolls.

3) Filler or border elements occur as an integral part of all designs. In Designs B, C, E, F, and G, there is a continuous scallop line or series of triangles flanking the major element of the design above and below. In Designs A and D, only filler elements within the body of the decorative field occur.

There is definite emphasis upon even spacing between all elements of the designs, and one gets the impression that large blank spaces are undesirable. By using fillers and borders and by spacing elements uniformly, large blank areas are avoided.

Horizontal lines, defining the decorative field, usually occur above and below the scallop borders of Designs B, C, E, F, and G, indicating that the latter does not serve that function. The author feels that Leland Incised designs are derived ultimately from the earlier types, Sicily Island Incised and French Fork Incised. The scallop border and filler elements may be analogous to the triangular fillers characteristic of Sicily Island Incised.

4) All designs, except D and F, possess a symmetry such that vessels can be turned up-side-down without changing the form of the design being portrayed. In Design D, symmetry is lacking in both the presumably early and late varieties (see Moore 1911:Fig. 7).

5) The use of cross hatching or punctation to contrast adjacent portions of the design is common in Designs C, E, and F. It is not found in designs lacking symmetry (D and G) and those consisting of scrolls (A and B) when the scroll axis is defined by circles; although in the case of Design B it does occur when scroll axes are defined by the intersection of scroll arms.

Neitzel illustrates a bowl from Fatherland site (1965:Fig. 20, n) in which red paint is used with Design B to contrast adjacent areas. Paint could presumably be substituted for cross hatching or punctation in all designs where these occur.

6) There is definitely a shift to the use of three close-spaced lines in designs of the late pre-historic and historic period. Design E alone continues to make use of only a single, or at most, paired, line in the historic period. In Designs F and G, even the line defining the rim is tripled. Three lines occur early in the scroll arms of Designs A and B, but border elements may remain as single lines. In historic examples of Design B, all elements are tripled.

7) There is definitely a shift through time, away from an incision technique producing lines that are broad and polished and carefully executed, to a technique which produces narrower and less regular lines.

Leland Incised is found over a considerable area in the Lower Mississippi Valley. At some sites noted above--specifically those located on the Lower Ouachita River and at the mouth of the Arkansas River--it may be a trade item. The type is probably indigenous to that area of the alluvial valley lying between Greenville, Mississippi, and Baton Rouge, Louisiana, and including the Lower Yazoo Basin, the Upper and Lower Tensas Basins, the lower valley of the Big Black River, and the mouth of the Red River. It is probable that all recognized designs are found throughout the area, although this can not be verified with the pottery sample available to the author. The presence of Leland Incised pottery with recognizable designs in the Baton Rouge area is attested to in the Louisiana State University collections from Peter Hill (31-K-2) and Rosedale (31-K-1) sites, which contain examples of Designs A, B, and F. Pottery from the Bayou Goula site, with the exception of Bayou Goula variety is so similar to Leland material from the historic Natchez and Taensa sites to the north that it may well be the result of Taensa residence on the site in 1706. At the opposite end of the area, Leland designs are found at sites such as Winterville, Lake Washington, and Leland. At Lake Washington, for example, vessels bearing Designs A, B, C, and G are illustrated by Daniel Wilson (1876:Fig. 87).

Several distinct tribal groups resided within this area of the alluvial valley in historic times. According to Swanton (1911), these were the Koroa, Yazoo, Tunica, Taensa, Natchez, Houma, Avoyel, Okelousa, and Bayou Goula. The formal complexity of Leland Incised decorated designs is such as to indicate rather close communication among these groups. Assuming that these designs had a specific iconographic or meaning component, we can postulate a degree of sharing of belief systems throughout the area.

The foregoing analysis has an obvious bearing on the problem of classifying Leland Incised pottery. Most researchers in the Lower Mississippi Valley rely very little on design in sorting this pottery. This is amply demonstrated by the variety of type designations applied to each design in the literature. In the most thorough-going classification devised to date (Phillips 1970), it is obvious that the author has made little use of design. Of the eight varieties recognized by Phillips, only two, Deep Bayou and Blanchard, are described as having distinctive designs. The remainder all bear "running scroll and meander patterns with or without triangular fillers." The major diagnostics in Phillips classification are paste, number of lines used in carrying out the decoration, and incision technique.<sup>1</sup>

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<sup>1</sup>In this, of course, he is conforming to the criteria set out in the original definitions for many of the varieties.

In the author's experience with pottery from the Upper Tensas Basin and Natchez, Mississippi area, the criterion of paste has little cultural significance. The presence and absence of shell tempering seems to reflect primarily site latitude. In the Upper Tensas Basin and Natchez area, the author is ignoring paste and classifying Leland Incised pottery with Addis or St. Catherine's paste as variety Leland, due to similarity in design and workmanship to the type material from the Lower Yazoo Basin.

Leland, Natchez, Fatherland, and Bayou Goula all possess essentially similar designs according to the published descriptions. They differ in paste and number of lines used to execute the decoration. The present analysis indicates that, except in the case of Bayou Goula, the number of lines with which a design is portrayed is not an altogether accurate sorting criterion. Three lines are used in examples of Designs A and B that date to early Fitzhugh phase. The juxtaposition of several lines in certain parts of all designs may have the appearance of the three lines characteristic of Fatherland. There is a definite increase in the use of three lines in the historic period, but unless some attempt is made to identify the design being portrayed, it is quite possible to sort early pottery as Fatherland.

The author can see no value in the distinction between Fatherland and Natchez as these varieties are commonly defined (Phillips 1970; Quimby 1942:263-265). Usually the same design will occur at a single site in both two and three line renditions.

The present study has shown that Leland Incised makes use of several distinct decorative designs throughout its history and that some of these go through changes that have potential as chronological markers. These changes should be taken into account in the classification of Leland Incised pottery. On the basis of this study the author suggests the following elaborations and revision of Phillips' Leland Incised classification:

- 1) Ferris is a legitimate variety with considerable chronological and cultural significance. Several vessels are known which conform to Phillips' criteria. The distinctive characteristic of the variety is its use of multiple lines in the scroll arms and the degree to which they encircle the scroll axis. These features result in a wide band of lines surrounding the scroll axis. Only Designs A and B in their earlier stage of development possess these characteristics. Scrolls may occur in one or two rows, and the border lines may or may not be broader than the lines of the scroll arms. The variety dates to the first half of Fitzhugh

phase and Lake George phase, and is known from the Ferris, Anna, Swift, and Haynes Bluff sites. Ferris may be restricted in distribution to the Vicksburg-Natchez area.

2) Leland variety should perhaps be restricted to Designs A and B in their earliest stage of development, excluding the material described as Ferris. According to this revision, Leland is characterized by scroll arms that usually consist of only a single line, and scroll arms that do not encircle the scroll axis to any great extent. Border lines may or may not be broader than scroll lines. Phillips' criterion of broad, polished lines still applies, but the criterion of paste must be broadened to include all fine-grained pastes, whether shell tempered or not. As defined, the variety is found throughout the Alluvial Valley from Greenville, Mississippi, to Baton Rouge, Louisiana.

It is possible that a temporally and spatially distinct variety which Phillips recognized as Leland does exist in the Lake George area, in which case the term Leland should be retained for it. In the author's experience, however, the Lake George material is only part of a much more widespread phenomenon. The rationale for distinguishing Leland and Ferris varieties, lies in the probably greater temporal and spatial distribution of the former.



3) Fatherland could be restricted, with some justification, to pottery bearing Designs A and B in their late and latest stages of development. These designs are characterized by scrolls occurring in a single row only. In Design A, borders are absent. In Design B, borders are present and multi-lined. In Design B there is a tendency for scrolls to encircle the axis one or more times. Incision is narrow and not polished over.

4) Design G has a short duration in time, occurring only in historic and late prehistoric sites. It may be executed with two or three lines. Only rounded bowls occur. This design should be given variety status. In the sherd counts of the present report, such pottery has been classified as Fatherland.

5) Design F accounts for the majority of pottery that is usually classified as Natchez Incised (see illustrations in Quimby 1942:Plate 13, and Quimby 1957: Fig. 41). On the grounds that Design F may have temporal significance, it is suggested that it be given variety status and be designated, Natchez. Examples with additional lines incised within the S-shaped bands are to be included within the variety. The variety dates to late Fitzhugh-Transylvania phases and the historic period.

6) Designs C and D could be given separate variety status. Phillips clearly had Design C in mind when he established the variety, Deep Bayou.

7) Design E seems to last throughout the existence of Leland Incised, and does not undergo identifiable change. While this is possible, the author doubts that such is the case. It seems premature, however, to even make suggestions for handling the design typologically.

8) Most of the pottery variation that Phillips (1970) had in mind when he defined the variety, Dabney, would be subsumed under one or more of the above suggested categories. The vessel he illustrates on page 105, for example, would be classified as Leland according to the above suggestions. Nevertheless, there is a need for a variety which has the characteristics of coarse shell tempering and decoration that is divergent in technique and form. Such pottery occurs on the western and northwestern peripheries of the area where Leland Incised is characteristic. In the Lower Ouachita and Lower Arkansas Valleys and southeast Arkansas as a whole, pottery occurs with Leland designs, most frequently Designs B, E, and F; but paste is usually coarsely shell-tempered, vessel shape is frequently of divergent bottle forms, and incision may be somewhat sloppy. With the addition of cross hatching, this pottery qualifies as Hudson Engraved, but no type has been established for specimens without cross hatching. In the author's counts for the Lower

Ouachita sites, this pottery has been classified as Leland Incised, var. unspecified. Perhaps Dabney would be a better designation. Sites where such pottery has been seen by the author are Pritchard Landing, Keno, Glendora, Sycamore Landing, Ward Place, Medley Place, and Tillar.

The above remarks have been offered purposefully in the form of suggestions. More data is needed on designs, specifically Designs C, D, E, and F, before any attempt is made at revising Phillips' recent classification of Leland Incised. In line with this position, the author has not followed his own suggested revisions in classifying Leland Incised pottery from sites in the Upper Tensas Basin, but rather has adhered to Phillips' classification.