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CHAPTER I

INTRODUCTION

This thesis will be oriented toward providing comparative data for the historical archeologist through the analysis of the ceramic assemblage recovered from the eighteenth century Spanish merchant ship, the San Joseph y las Animas. The need for description and analysis of colonial artifacts has been recognized in historical archeology (Goggin 1960; Miller and Stone 1970). In a period when the problem oriented approach to archeology is emphasized, a purely descriptive analysis might need special justification. Like the analysis of the material recovered by the National Park Service from the Missouri riverboat, the Bertrand; the cultural significance of the ceramic assemblage of the San José is of importance: "Once in a very great while a few historic artifacts are found which contribute significantly to our knowledge of a particular period" (Switzer 1974). The ceramic analysis of the San José collection should make advancements in the understanding of eighteenth-century Hispanic material culture. The present study will be restricted to a purely descriptive analysis because of certain biases inherent in the non-systematic, salvage oriented recovery of materials from the San José.

The flota system was established early during Spain's New World colonization. Under this system, Spanish merchant vessels were escorted by heavily armed warships to protect the ships from the piracy of Spain's European enemies. Two fleets departed Spain yearly

for the New World colonies. The first, the Tierra Firme Armada, left Spain for Columbia and the Isthmus of Panama "where it picked up goods and treasure brought northward up the coast from Peru by the Pacific Armada" (Clausen 1965:5). The second fleet, the Nueva Espana Armada, sailed from Spain to Vera Cruz, Mexico loading treasure from New Spain and Oriental trade goods from the Manila Galleons. The fleets joined for the return trip to Spain in Havana during the summer, sailing "out of the Caribbean Basin through the Florida Straits, and into the Atlantic north of the Bahamas" (Peterson 1972: 254).

On July 13, 1733, the Spanish fleet reportedly consisting of seventeen to twenty-two ships, set sail from Havana for Spain under the command of General Don Rodrigo de Torres. The fleet carried 12,287,254 pesos in silver specie and bullion, 6,400 pesos in gold coins, and a large amount of unworked precious metals. Two days out of port, the fleet met a hurricane near the Florida Keys which scattered the ships along eighty miles of coast from Key Vaca to upper Key Largo. The Spanish conducted a salvage of the wrecked vessels soon after the disaster, recovering more treasure than that listed in the ship's manifest. This was not unusual, since large amounts of contraband material were included in the cargo of Spanish ships to avoid having to pay taxes on the goods.

Extensive salvage operations were not carried out on the San Jose¹ since the ship was wrecked in waters too deep to be worked by the Spanish salvors. It was also believed that the vessel was covered with sand soon after sinking (Burgess 1974:67).

The San José was a 326 ton Spanish merchant ship, probably of English construction. Its registered cargo included "30,435 pesos in silver specie and bullion, plus sugar, chocolate, indigo, cochinal, dyewoods, cocoa, hides, ceramic ware, tobacco, vanilla and various types of drugs" (Marx 1969:46). According to the regulation size and armament of comparable ships constructed at the Royal arsenals in the early eighteenth-century, the deck of the San José would probably measure from 29 to 31 feet and a fifteen foot depth of hold. The ship should have carried thirty to forty cannon. Twenty-seven cannon were recovered during the salvage operations and others were probably thrown overboard to lighten the ship during the storm (Burgess 1974:70). When the San José was discovered it had cannon and ballast stones showing and "large sections of the bow, decking, ribs, and rudder still intact" (Cockrell 1972:2).

Apparently the ship had struck an offshore reef in about ten feet of water. About one-fourth a mile towards shore, the San José struck a sandy bottom about twenty feet deep where it lost its rudder, five cannon and a considerable amount of cargo. The main hull of the ship continued approximately two hundred and fifty feet from the rudder and settled in about thirty feet of water:

Most of the cannon she carried was discovered either right on top of the ballast on the lower deck or relatively close to the main section of the lower hull. Most of the starboard section of the hull was lying between ten and twenty feet from the lower section of the wreck, which consisted of the lower deck over the ship's keel. Covering the lower deck, we discovered about 200 tons of ballast rock with a trail of ballast rock leading to the area where the ship had lost its rudder and part of its stern (Marx 1971:48-49).

The wreck of the San José was located in the spring of 1968 using magnetometer off the coast of Plantation Key, Florida (Fig.1). Believing the San José to be outside the three mile limit controlled by the state of Florida, Marine-Tech Salvage Company, operated by Tom Gurr, began the salvage of the wreck under a federal license. The salvage vessel Parker was used to excavate the wreck site utilizing eight-inch airlifts. During this period a map of the excavation was constructed (Fig.2). The map was constructed by the Underwater Exploration Project, Smithsonian Museum of History and Technology, under the direction of Mendel Peterson. The destruction of the site caused by the utilization of airlifts is visible in this sketch map. No other maps or field notes are available for this period of excavation.

In response to the claim by the state that the wreck lay within the territorial limits of Florida, a temporary restraining order was issued in November 1968 to stop the salvage of the San José. This began a chain of legal events which would not be resolved for years to come. The wreck of the San José was destined to be a test case in contesting the establishment of the ownership of submerged lands claimed by the state. During the time when the ownership of the site was being determined, the site was being looted, with dynamite used to "blow a group of cannon apart" (Nolan, P.C.).

The case was decided in the favor of the state based on Florida's Constitution of 1865 which set the state's boundary at the barrier reef, thereby extending Florida's jurisdiction to three miles beyond the reef and into the Gulf Stream. Based on this decision,

the San José was placed within the boundary of Florida submerged lands, and all artifacts salvaged from the wreck became property of the State of Florida. Since Gurr had made a sizeable investment to recover the artifacts, the court decided that he should receive fifty percent of the material and he was allowed to obtain a legal salvage contract in order to continue work on the site. Marine-Tech would receive the normal seventy-five percent of the artifacts recovered under that contract.

Marine-Tech was issued a contract to salvage the San José in May of 1969. The site was worked under this contract until August of 1970 using the salvage vessel Grifon. During this period the San José was excavated using a "blower". This device deflects the prop-wash downward creating a strong current which washes away the overburden. Systematic and controlled recovery of material under this contract was impossible. No grid system was utilized and there was no criteria set for recovery. The state archeologist and state agents were prohibited from doing anything which would slow down salvage operations: "State agents had no authority and no control over recovery methods. They could only watch, and try to make sure that all treasure recovered was reported" (Barada 1975:59). Even then, it was impossible to keep a state agent aboard the salvage vessel at all times during the operations.

A state contract was issued for the salvage of the San José to Underseas Mining Corporation, another association of Tom Gurr. Underseas Mining worked the site using the salvage vessel El Capitán from the Spring of 1972 through the end of 1973. Work under this

contract was carried out using the blower, primarily in the rudder section of the wreck. More stringent criteria for artifactual recovery were enforced during this contract, for example, the salvors were required to recover ceramic fragments.

The following study is a descriptive analysis of the ceramic remains recovered from the San José a 1733 shipwreck. Included are materials recovered prior to the state's involvement, and those salvaged under contract with Marine-Tech and Underseas Mining which were stored at the Florida Division of Archives, History and Records Management. Ceramics used as storage containers (i.e., olive jars and marine ware) will not be covered in this study, with analysis restricted to domestic ceramics.

It should be noted here that the San José ceramic collection contains certain biases which prohibit the utilization of quantitative analysis. The importance of quantitative data in the study of historic ceramics has been discussed by historic archeologists (South 1977:31-47; Stone 1968:73-90). Stone states that in addition to the study of types present, quantitative analysis also includes the proportions of the different types present. Without this data he states that: "...it will be impossible to project social and regional differences from archeological material" (1968:76).

A large amount of the ceramics from the San José was left by the salvors at the site due to the lack of commercial resale value of this material. In addition, it is known that ceramic and other artifactual material was recovered from the wreck which was disposed of in violation of state salvage legislation. Because of these biases in sampling, no frequency counts or proportional statements

between classes of ceramics will be made. Even though these problems are apparent throughout the present study, the descriptive analysis of this material remains useful because of the excellent state of preservation of the ceramic artifacts and the closed context from which they were recovered.

CHAPTER II

EXPORT PORCELAIN

1. Introduction

Although Oriental Export Porcelain has been recovered from British, French and Spanish sites in North America, relatively few publications deal with the subject from the standpoint of the historical archeologist (Aga-Oglu 1955; Smith 1955; Von Der Porten 1972). Porcelain has also been recovered from coastal aboriginal sites in Florida and California, acquired by the Indians from the salvage of cargo from Spanish shipwrecks (Smith 1949; Von Der Porten 1972). This lack of archeological research on Chinese Export Wares has been due to the fragmentary nature and paucity of porcelain materials found in land sites. Until recently, a whole piece had never been archeologically recovered, and fragments from historic land sites are usually too small to make reconstruction of design and form of the vessel.

Spanish trade with China began in 1573 with the inception of the Manila Galleon porcelain trade. Export wares were transported from the Phillipines across the Pacific to Acapulco to an annual convoy. In addition to porcelain, silks and metal objects were received in trade from the Orient for Spanish silver. From Acapulco, these goods were carried overland to Vera Cruz, Mexico. Here they were loaded onto the Spanish plate fleet destined for Seville via the Bahama Channel and the Atlantic Ocean (Smith 1955).

The manufacturing center of Chinese porcelain was located in the interior city of Chien t'ê Chin. Porcelain manufactured in Chien t'ê Chin was decorated in underglaze blue on white. These wares were reportedly shipped in wholesale lots to Canton where an overglaze enamel or gilded decoration was superimposed over the overglaze blue on white design on selected pieces prior to export. Phillips notes that: "All the establishments in which the chinaware was given its final decoration were located in the suburbs of Canton" (1956:47). Since the porcelain wares requisitioned for Imperial use were not shipped to Canton for the addition of the overlay design, it seems plausible that the potters in Chien t'ê Chin also decorated selected export wares in overlay enamel before shipment. The blending of the underglaze decoration with overlay designs of the San José vessels suggest possible decoration in underglaze and overlay at a single manufacturing site.

The additional decoration of overlay enamel "required special artists and additional firings" which increased the price of the porcelain (Miller and Stone 1970:86). The plain underglaze blue on white vessels without polychrome overlay decoration dominated the export wares.

This additional expense for overlay decoration is reflected in the scarcity of polychrome Chinese porcelain recovered from American colonial sites. Only eight percent of the porcelain sherds recovered from Fort Michilimackinac contained overlay decoration. This predominance of plain underglaze blue on white porcelain at the fort "duplicates the experience to date in other colonial sites" (Miller and Stone 1970:86). A reversal of this trend occurs in the Oriental

Export Porcelain recovered from the San José, with over ninety percent of the porcelain assemblage exhibiting evidence of overlay motifs. This percentage varies with vessel form. The proportions of the overlay design porcelain should be viewed with some caution, however, because of the sampling biases discussed above.

Polychrome Chinese Porcelain has been recovered in small quantities from various Florida sites, including St. Augustine and the Higgs Site (Deagan 1975; Smith 1955). Porcelain fragments from Florida sites examined by Kamer Aga-Oglu combine an underglaze blue on white decoration with overglaze enamels in green, yellow, red and gilding (1955).

Trade porcelain came to be influenced by European vessel shapes and design motifs with the decorations often becoming "a meaningless juxtaposition of decorative motifs suggested by Western Merchants" (Savage 1954:83).

Chinese porcelain was manufactured in an assembly line fashion. The following description is that of Father d' Entrecolles, a Jesuit missionary writing in the early eighteenth-century:

...it is surprising to see with what swiftness these vessels run thro' so many hands. Some affirm that a piece of china, by the time it is bak'd, passes the hands of seventy workmen; which I can easily believe after what I have seen my self. (Phillips 1956:9).

Two methods were used in the manufacture of Chinese porcelain. Wheel thrown wares were imperfect in form when they came from the wheel. These pieces were placed on a wheel which contained an attached mold of the appropriate shape. In this manner consistency of vessel form could be maintained. The second method of manufactures

used only a mold (Phillips 1956:9).

The painting of the vessels was done in the same assembly line fashion:

"...the painting part is divided, in the same work-house among a great number of operators. It is the sole business of one to strike the first colour'd circle, near the edges of the ware; another traces the flowers, which are painted by a third; it belongs to one to draw rivers and mountains, to another birds and other animals; as for the figures they are commonly the worst done of all" (Phillips 1956:9).

It should be noted that the Manila Galleons carried porcelain of both Chinese and Japanese manufacture. Several of the pieces in the San José collection contain what may be Japanese design elements (Fig.5 b,c).

A variety of vessel forms are represented in the porcelain material recovered from the San José with several patterns predominating each form. Vessels include plates, cups, case bottles and several bowl forms.

CHINESE EXPORT PORCELAIN

Analysis

Paste: Method of Manufacture. Wheel thrown using mold for additional shaping, and mold-made pieces are included in the San José porcelain collection.

Tempering. None noted.

Color. White.

Form:

Plate Form 1	Rim diameter	21-21.5 cm.
	Base diameter	11.5-12 cm.
	Height	3.4-3.7 cm.
	Thickness	0.2-0.3 cm.

The San José collection includes three major patterns of this ring foot form (Fig.3,4). Several reconstructed plates of each pattern are present.

Decoration:

The plates were decorated in underglaze blue cobalt then painted in overglaze enamels. The enamels have since eroded away, leaving only tracings of the overlay design. Colors used to paint this overglaze design on Chinese porcelains include green, yellow, red and gilding (Aga-Oglu 1955:100).

Design 1:

The interior of the plate is separated into three symmetrical areas by an underglaze blue border. A scattered foliate motif is present within these borders. The center is bordered in underglaze blue with foliate elements inside. The rim border alternates with a plain blue and white design. A more complex floral overglaze pattern is evident in areas not covered by the underglaze blue design (Fig. 3a).

Design 2:

This plate has a symmetrically bordered design very similar to design 1, suggesting manufacture at the same kiln site. A banded circular area within the center contains a bird in underglaze blue. The body of plate contains underglaze blue flowers and geometric designs. The underglaze blue rim border alternates between geometric and floral elements with a lustrous brown band around the lip of the plate. Areas of the vessel not covered in underglaze blue contain overglaze enamel floral design (Fig. 3b).

The exterior of the plate contains a simple limb like design in underglaze blue with overglaze flowers attached (Fig. 3b).

Design 3:

An underglaze blue double symmetrical motif is present with a more elaborate overglaze floral and geometric design. The underglaze pattern contains a circular center area bordered by double linear bands. Within this central area is the overlay decorative motif of an eagle or dragon. The body of the plate has two vases with foliate designs on either side and a bird on the left side. Floral, geometric and bird designs are evident in the body of the plate in overglaze. The edge of the rim is bordered by underglaze blue horizontal bands with an overglaze geometric motif (Fig. 4a).

The exterior of the plate contains a limb design in underglaze blue with a simple floral overlay motif similar to that of design 2 (Fig. 4b).

Plate Form 2	Rim diameter	not available.
	Base diameter	6 cm.
	Height	not available.
	Thickness	0.3 cm.

Only the base of this small plate form is present. Vessel form reconstruction is not possible.

Decoration:

This piece is decorated in underglaze blue without overlay decoration.

Decoration:

The pattern on this plate is similar to the blue willow pattern with landscape and geometric designs (Fig. 5a).

Bowl Form 1	Rim diameter	10 cm.
	Base diameter	6 cm.
	Height	2.5 cm.
	Thickness	0.3 cm.

This shallow bowl has a scalloped rim and is decorated in underglaze blue with overlay enamel. At least two bowls are represented by this pattern. The interior is separated into six areas around a circular central floral motif. Each of these areas contains a geometric or floral design with overlay motifs evident (Fig. 5b). The exterior design, a sketchy grass or limb motif, is done in underglaze blue.

Marks & Inscriptions: None.

Bowl Form 2	Rim diameter	27 cm.
	Base diameter	9.5 cm.
	Height	7 cm.
	Thickness	0.5 cm.

One partially reconstructed porcelain barber's bowl in underglaze blue on white was recovered from the San José. It has a floral motif in the center with a wide bordered rim. A landscape design with houses, trees and mountains is enclosed within the horizontal bands surrounding the rim (Fig. 5e). The exterior is undecorated. No marks or inscriptions found.

Case Bottle Form	Width	8.0-8.4 cm.
	Height of vessel	8 cm.
	Height of neck	2.5 cm.
	Neck diameter	2.5 cm.
	Thickness	0.3-0.7 cm.

One whole case bottle and a large number of partial vessels and fragments were recovered from the San José (Fig. 6a,b). These four sided bottles with threaded pewter screw-on tops are decorated in floral and foliate motifs in underglaze blue with elaborate overlay designs in silver and possibly other overlay colors (Fig. 6a). Two patters are present on alternating sides of the bottle. No marks and inscriptions are noted on these vessels.

An interesting process was used in the manufacture of these bottles. The clay was rolled on a cloth with a rolling pin. Once the clay was flattened, a rectangular preform was cut out, which was folded to form a four sided rectangle. The side with the cloth impression was placed on the interior (Fig. 6c). A wooden form mold may have been used during this step. A square piece was cut out of the flattened clay mass to form the base of the bottle. The top was hand molded and applied to the base. Excess clay was then cut away to accommodate the threaded pewter cap and the vessel was fired (Fig. 6d).

Rice Bowl Lid Form	Rim diameter	not available.
	Base diameter	2.8 cm.
	Height	not available.
	Thickness	0.3 cm.

This piece represents a lid to a Chinese rice bowl. It is

decorated in underglaze blue with overlay enamel and contains horizontal bands at the base with foliate and geometric designs (Fig. 5d). The interior has double horizontal bands in the center enclosing an underglaze blue design. No marks or inscriptions.

Cup Form 1	Rim diameter	5.2 cm.
	Base diameter	3.7 cm.
	Height	7.5 cm.
	Thickness	0.3 cm.

Four major vessel shapes of cups are present in the San José material. The first form contains four partially restored cups of the same motif containing a pedestal base, smooth stems and small straight walled cups (Fig. 4c). These cups are decorated in underglaze blue with additional overlay design. The base is cobalt blue. The cup contains a horizontal band of underglaze blue. Above this band is a negative painted design in underglaze blue with a darker blue floral overglaze and a solid overglaze over the white portion of the cup above the horizontal band. There is no interior decoration.

Cup Form 2	Rim diameter	8 cm.
	Base diameter	3.6 cm.
	Height	7.4 cm.
	Thickness	0.2 cm.

This ring foot, handleless cup is the most common cup form in the San José porcelain collection.

Design 1

These cups are similar in design to the stemmed cups with an

underglaze blue negative painted design (Fig. 4d). An overglaze design, probably in silver, is present but badly eroded, and covers the white area not painted in underglaze blue. There is no design in the interior or under the base of this cup. At least six cups of this type are in the ceramic collection.

Design 2

This cup has a simple floral design in underglaze blue with light blue horizontal lines near the base and rim of the cup. There is a brownish ring around the lip and an elaborate floral design in overglaze is evident. The interior has a small design of a flower with underglaze blue leaves and overglaze enamel petals. At least two cups of this type are represented (Fig. 4c).

Design 3

An underglaze blue on white design of a vase on a stand with floral motifs is found on this cup. Two horizontal bands in underglaze blue are located near the base of the cup. A floral overglaze pattern is evident. The interior contains an underglaze blue horizontal band around the rim with the base bordered by linear bands enclosing a floral design. Six sherds represent this pattern (Fig. 7a).

Design 4

This pattern is represented by half a cup in underglaze blue on white with overglaze enamel (Fig. 7b). A simple floral motif is present in underglaze blue with a more elaborate floral design in overglaze enamel. There is a thin horizontal band in underglaze blue near the base with a heavier band around the rim. The interior

has a thin underglaze blue band at the rim with a floral border in overglaze. A flower is located in the interior base with underglaze blue leaves and overglaze petals.

Design 5

A landscape design with a bird and human form, along with geometric designs is painted in underglaze blue (Fig. 7c). An overlay design is present in floral and geometric motifs. The interior contains double horizontal rim bands in light blue cobalt underglaze with a geometric overglaze within a band. The interior base has an underglaze blue landscape motif with a man on a horse. Four sherds are present of this pattern.

Design 6

This pattern includes circular and geometric motifs with scattered foliate designs and a horizontal band at the base in underglaze blue. A more delicate floral design was present in overglaze enamel. Two body sherds represent this pattern (Fig. 7d).

Miscellaneous Designs

Five miscellaneous underglaze blue on white designs are present in this form. They contain landscape and geometric patterns and all contain overglaze motifs.

Cup Form 3	Rim diameter	8 cm.
	Base diameter	3.5 cm.
	Height	not available.
	Thickness	0.6 cm.

One unusual cup form was recovered from the San José (Fig. 7e).

This cup was mold-made in two parts, one inside of the other, the outer section forming a latticed pattern over the body of the cup. Decoration is in underglaze blue on white with floral and faunal patterns. Geometric and floral patterns were applied in overglaze enamel. The interior contains a foliate horizontal band in underglaze blue and an overglaze enamel flower in the interior base.

Cup Form 4	Rim diameter	5.5 cm.
	Base diameter	2.4 cm.
	Height	3.7 cm.
	Thickness	0.3 cm.

Several pieces of a less vitreous porcelain were recovered from the San José. These pieces are in the form of Chinese "teacups." One whole tea cup was recovered which was not decorated in underglaze blue, but had been decorated with green overlay enamel (Fig. 7g).

The second pattern is of the same form, but is decorated in underglaze blue on white. This tea cup had a double horizontal band at the exterior base and rim and in the interior rim. A foliate motif is on the exterior with a grass motif in the interior base (Fig. 7f).

CHAPTER III

MAJOLICA

I. Introduction

Majolica is a soft, porous earthenware which is covered with a tin-enamel glaze and fired at relatively low temperatures. Lead glazes had been previously utilized making functional improvements in ceramic wares by creating a hard surface better suited for tableware. Painted lead glaze decoration, however, was unsatisfactory since the glaze would tend to run upon firing and destroy the decorative motif (Lister 1975:18). The addition of powdered tin oxide created an opaque hard white surface to which painted designs were added prior to the second firing. A clear lead glaze and a third firing were later introduced to further increase the hardness of the ware.

The manufacture of majolica pottery was originally an Islamic tradition developed by the ninth century A.D. The spread of the use of tin enamels in ceramic technology is a complicated and extensive story which involves the Middle-East and later much of Europe, with tin enamel potters moving often from one country to the next. The reader interested in the Old World development of majolica is referred to Caiger-Smith's work on tin enamel ceramics (1973).

Majolica was introduced to Spain during the Moslem invasions of the eleventh century. Spain also received a continuous flow of influence from China through export porcelain, and from Italy at the start of the sixteenth century with the introduction of the Italian-Talavera Tradition.

Mexican potters were influenced by these traditions in addition to

a second wave of Chinese influence through the cross-country transportation of export porcelain from Acapulco to Vera Cruz.

The paucity of data on the Mexican ceramic industry is a result of the lack of stratigraphic excavations of historical sites in the country. No Spanish New World kiln site has yet been excavated. Historic references note that the Mexican majolica industry had started by the early sixteenth century, with a formal potter's guild coming into existence in Puebla by 1653. However, archaeologically recovered specimens show that strict compliance to the regulations of the guild was not in effect. Lister notes that:

By then evasion of the law had become characteristic of colonial life. Variations in craftsmanship, modifications of physical composition of the pottery, no regular marking of pots to identify makers, and universal use of kiln cockspurs which marred glaze surfaces, all specifically either defined or prohibited by the ordinances, suggest laxity in compliance with regulations... Probably the Crown's representatives did not interfere with the potters as long as flagrant abuses, such as nonpayment of taxes or black marketing the work of other potters, did not occur (1975: 26).

This lack of quality control is evident in the Mexican majolica recovered from the San José. No maker's marks are found on the majolica and scars from the spurs used during firing are present on all plate forms. This further indicates that these plates were of poor quality and were being transported as cargo since the spur marks and heavy drops of glaze should have been broken off with use.

Indian labor was utilized in the lower positions from the conception of the Mexican majolica industry, having been trained in the use of the potter's wheel, glaze vats and the kiln by the Spanish. Regional variations occurred in the manufacture of the ware as a result of the use of local materials and local labor. It is interesting to note, however,

that Mexican majolica design elements never contained "unique Indian themes or local exotic flora or fauna" (Lister 1974:25-26). In 1681 the potter's guild regulations were amended to allow persons of all physical types in Mexico to hold any position in the manufacture of majolica except the position of inspector. Lister notes that this represents a lack of interest of Spanish descent persons in holding a monopoly on the positions (1974:26).

Goggin discusses majolica on three levels: types and complexes, which are "classificatory units utilized for a specific purpose" and traditions, which "are of broader descriptive scope than either of the former and thus are more useful in giving a wider picture" (1968:206-207). The tradition concept will be utilized in this study, supplemented by type classification whenever possible.

2. Medieval Tradition

The Medieval Tradition "is characterized by the relative thickness and massiveness of vessels, the concave bottom plate, and angle-sided escudillas as distinctive vessel forms, and an overall design layout" (Goggin 1968:207). This tradition first occurred in the new world in 1493, having been present in Spain for several centuries. The tradition dominated ceramic styles until 1550 with its importance declining after 1600. Goggin gives the end date of the tradition around 1650.

The Medieval Tradition is represented in the San José materials by two whole and one partial Columbia Plain majolica escudilla bowls. This form, probably manufactured in Seville, is the most common of the Columbia Plain wares. It has a ring foot, common in the later escudilla forms, along with the characteristic poor shaping, unusually thick walls,

and a very thin tin-enamel glaze.

Columbia Plain was a major ware during the sixteenth-century and was considered "a good marker for pre-1650" by Goggin (1968:124). In light of more recent archeological evidence, an extension of this date might seem plausible.

Columbia Plain ceramic remains have been recovered in small amounts from the Higgs Site, the Castillo de San Marcos, and other post-1650 St. Augustine sites (Goggin, 1968; Smith 1949; Deagan 1974, 1976; Shephard 1975). The presence of this ware at historic land sites has been explained in the past as evidence of previous occupation or as heirlooms.

Spanish shipwreck sites offer an excellent opportunity in the study of ceramic chronologies. Since the Spanish kept extensive written records on the shipping industry, these wrecks can be precisely dated, often to the exact day of sinking. Goggin recognized the importance of this "closed context" nature of the ship wreck site: "Generally speaking, a wreck is a delimited cultural unit uncontaminated by material from another time" (1960:153). However, at the time Goggin constructed his majolica chronology, little work had been carried out on Spanish shipwreck sites and limited excavations had been conducted on Spanish Colonial land sites.

Columbia Plain majolica has been recovered from another wrecksite, a 1715 Spanish shipwreck off the Florida coast near Ft. Pierce (Clausen 1965:9-10). The additional presence of this ware in the ceramic assemblage of the San José further suggests that the terminus for this type is later than that proposed by Goggin.

COLUMBIA PLAIN

Paste:

Method of manufacture. Wheel thrown.

Tempering. None noted.

Color. Cream colored paste.

Form:

Rim diameter 13.5 cm.

Base diameter 6 cm.

Height of vessel 5.5 cm.

Thickness 0.8 cm.

Two complete and one partial escudilla bowl forms of Columbia Plain were recovered (Fig. 14c). This form, the most common of the Columbia Plain wares, has a ring foot, a characteristic of later escudilla forms, along with the characteristic poor shaping and unusually thick walls.

Decoration:

These vessels are covered with a cream colored tin enamel with no decorative motif applied (Fig. 8a).

Marks and Inscriptions: None noted.

3. Chinese-Popular Tradition

The influence of Chinese porcelain upon tin-enamel ceramics is most dominant and persists throughout the history of the ware. This influence was present since the ninth century through trade connections between Islam and China. Prior to this interaction, glazed ceramics developed independently in the Middle East and China. Along with the establishment of trade between the two areas, an interchange of ceramic technology

developed between the two countries, with Islamic pottery having "almost as much impact on China as Chinese pottery in Islam, though the Chinese had certainly developed further" (Caiger Smith 1973:22-23).

Another wave of Chinese influence on majolica is evident in what Goggin calls the Chinese Popular Tradition. This tradition begins around 1550 in Spain, caused by the influence of Chinese blue on white trade porcelain. With the introduction of the Chinese-Popular Tradition, majolica vessel forms change from the "clumsier vessel forms of the Medieval Tradition to a more delicate thin-walled, deep, brimmed plate with a ring foot" (Goggin 1968:208). The design element changes at this time to include two elements: a central basal medallion and a rim strip or band.

This tradition occurs in Mexico during the early seventeenth century. In addition to the Chinese influence Mexican potters received via Spanish majolica wares, a primary wave of Chinese influence was present in the export porcelain being shipped across the country from the Manilla galleons in Acapulco to the plate fleet in Vera Cruz. Thus the heavy Chinese influence upon Mexican majolica decoration and vessel form is not surprising.

The Chinese-Popular Tradition is represented by two unclassified majolica patterns from the San José material.

CHINESE-POPULAR TRADITION

Paste:

Method of Manufacture. Wheel thrown.

Tampering. None noted.

Color. Cream colored.

Form 1:

Rim diameter	6.8 cm.
Base diameter	3.6 cm.
Height	6 cm.
Thickness	0.3 cm.

This pocillo form, inspired by Chinese tea cups, is one of the most commonly recovered colonial majolica forms (Fig. 14b). The handleless cup has a ring foot with a slightly everted lip. Since tea was not a popular drink in Mexico, these cups were probably used for drinking chocolate (Lister and Lister 1976:73).

Decoration:

This cup is decorated with a cobalt blue painted design over a white enamel background.

Design:

The decorative motif of this cup is a Mexican copy of a typical Chinese landscape design (Fig. 8d). The exterior rim and ring foot base are not decorated. Like the Chinese Export porcelain cups, there is a blue horizontal band around the interior rim. This piece is unclassified as to type. The exterior is discolored from contact with metal, making identification difficult. The blue glaze is thin with the design being hastily executed. Although the type is not identified, it was probably not manufactured in Puebla (Smith p.c.).

Form 2:

Rim diameter	13 cm.
Base diameter	5.8 cm.

Height 2.2 cm,

Thickness 0.3 cm,

One whole reconstructed vessel and portions of a second make up this category. The form is of a small shallow dish with a ring foot. (Fig. 14a).

Decoration:

The dish is painted in cobalt blue over a white tin-enamel base. The blue glaze is thin, unlike the Puebla glazes, and is outlined in a deeper shade of blue.

Design:

This plate is decorated with a thin layer of cobalt blue in an abstract floral motif. The blue decoration is outlined with a deeper blue. The central area is outlined by a thin band followed by a wider one. The vessel is unidentified as to type (Fig. 8c).

Marks and Inscriptions: None noted.

4. ITALIAN-TALAVERA TRADITION

A distinctive Italian decorative influence is evident in the Spanish majolica of the tradition Goggin calls the Italian-Talavera. This influence includes the use of polychrome decoration in cobalt blue, copper green, Naples yellow, orange-ochre and manganese purple in a central vessel motif of animal or human forms surrounded by intricate floral designs. The Italian-Talavera Tradition spread to Spain from Italy during the late sixteenth century, and later appears in France, Portugal, Holland and England (Caiger-Smith 1973:104). It is typified in Mexico by Abo Polychrome, blending the tradition received from Spain

with regional variations.

The Italian-Talavera Tradition is represented in the San José majolica collection by a polychrome barber's bowl of an unidentified type.

ITALIAN-TALAVERA TRADITION

Paste:

Method of Manufacture. Mold made.

Tempering. None noted.

Color. Cream.

Form:

Rim diameter 31 cm.

Rim width 7.5 cm.

Base Diameter 11.5 cm.

Height 8 cm.

Thickness 1 cm.

This ring foot vessel has a wide flattened rim with a portion cut away for the placement of the chin (Fig. 15a). These bowls were commonly used in Spain by barbers and surgeons: "This is not odd because these occupations were classed together in the socio-economic hierarchy of the times. Blood letting, or phlebotomy, was the most common medical treatment for many different illnesses" (Lister and Lister 1976:22).

Decoration:

The bowl is covered with a white enamel slip containing a painted decoration in aqua, blue, orange and purple.

Design:

The bowl contains a central animal motif, surrounded by a colorful floral design. The central area is separated by a double horizontal band in blue. There is another horizontal band around the lip of the vessel (Fig. 8e).

Marks and inscriptions: None.

5. Puebla Tradition

Although the Puebla Tradition borrowed elements from Spanish and Chinese ceramics, these were recombined into a new, distinctively Mexican tradition. It appears in Mexico during the later part of the seventeenth century and becomes the dominant Mexican tradition of the eighteenth century (Goggin 1968:208).

The first ware of this tradition was Puebla Polychrome, with lacy design elements in blue and black over a white enamel base. This type gives rise to a number of polychrome and blue on white types, including Puebla Blue on White (Fairbanks 1972:162). Puebla Blue on White was the major majolica ware recovered from the wreck of the San José.

PUEBLA BLUE ON WHITE

Paste:

Method of Manufacturing. Wheel thrown.

Tempering. None noted.

Color. Cream.

Form 1:

Rim diameter 20.5 cm.

Base diameter 10.5 cm.

Height 4.0 cm.

Thickness 0.4 cm.

Puebla Blue on White Majolica is represented by three separate decorative patterns, all of which are of the same form: a deep brimmed, ring foot plate (Fig. 15b). Each plate has three saggar marks on the interior and exterior surface. These were caused by clay spurs used to separate plates in the saggar, or clay box in which the vessels were stacked to be fired. The plates became fused to the spurs, which are broken off after the plate is fired. The scars are usually ground smooth, leaving unenameled spots (Goggin 1968:5). The scars on the San José majolica plates are unground, indicating poor quality control in the manufacture of these ceramics. The presence of large drops of glaze on the exterior bases suggest that the plates were fired with the interior face down, a practice which would aid in the control of warping.

Decoration:

These plates are painted in cobalt blue over a now crazed white enamel background. Distinctive raised Puebla decorative elements, such as rim clusters are present.

Design:

Plate design 1:

The first pattern contains a standing animal motif, filling up the central portion of the plate, continuing onto the edge of the rim. The rim is bordered by double horizontal bands in addition to the characteristic Puebla clusters (Fig. 9a). The exterior is not decorated (Fig. 9b).

Plate design 2:

The pattern has a central floral medallion motif with double horizontal bands and Puebla rim clusters (Fig. 9c). The exterior of this vessel contains no decoration.

Plate design 3:

This design contains a central medallion with a bird perched atop. There is a double horizontal band around the rim along with the Puebla rim clusters (Fig. 9d). This vessel contains no exterior decoration.

Marks and Inscriptions: None.

Form 2

Rim diameter	7 cm.
Base diameter	4 cm.
Height	7 cm.
Thickness	0.3 cm.

This pocillo cup, like that discussed in the Chinese-Popular Tradition, is of the same form as the Chinese Export Porcelain ring-foot handleless cups (Fig. 14b).

Decoration:

The cups are painted in cobalt blue over a white enamel background. The white enamel is crazed (Fig. 8b).

Design:

A distinctive Puebla Blue on White cluster design motif is painted in blue. There is a blue horizontal band around the rim. The ring foot base is undecorated.

Marks and Inscriptions: None noted.

CHAPTER IV

AZTEC IV WARE

1. Introduction

Aztec IV Ware was first described by Smith in the Higgs Site report (1949:12-13). Since that time, the ware has been reported from Ft. San Luis (Boyd et al. 1951:151), from Pensacola (Smith 1965:90), from various sites in St. Augustine (Smith 1962b; Deagan 1976; Sheppard 1975), and from shipwrecks along the Florida coast (Fairbanks 1972:1970-171). As a result of the small sample size and the fragmentary nature of pieces recovered from land sites, however, information on this ware is not extensive.

Aztec IV is also referred to as Guadalajara polychrome and Tonalá polychrome, both of which are regional names of its manufacturing center (Fairbanks 1972:1970-171). The Spanish called the ware bucaro, after the odorous clay from which Aztec IV ceramics were made. Spanish women believed that water which was stored in the bowls to absorb its odor was beneficial to their complexion. This belief led to the Spanish "cult of clay eaters", with women drinking the water stored in the vessels and eating crushed sherds for the improvement of their skin (Goggin 1968: 227).

This unglazed Mexican earthenware is similar to the red ware of the late Aztec Period (Aztec IV) from Lake Texcoco: "a latter day continuance of prehistoric Mexican Ware in both paste and decoration" (Smith 1949:12). Spanish Influence is responsible for the addition of the decorative loop handles and for the introduction of Spanish floral motifs to the

Indian-made ware. Aztec IV ceramics, theoretically comparable to the Colono-Indian Ware of the North American Indians, is still produced today in Mexico for sale to tourists. Chinese influence in form is also evident in the San José Aztec IV collection in the production of "rice bowl" lid forms (Fig. 11a). It is interesting to note that the Chinese handleless cup form, widely adopted by European tin-enamel potters and makers of Mexican majolica, was not present in the San José Aztec IV collection, nor has it been reported from other sites. This, along with the absence of other tableware forms usually recovered from archeological sites, would tend to confirm Smith's hypothesis that Aztec IV was a novelty ware manufactured for Spanish export.

Two major variants of Aztec IV ceramics are present in the San José material. These were distinguished by Smith in his original definition of the ware. Aztec IV Polychrome, Smith's "type A-1 Ware" and Aztec IV Blackware, his "type A-2 Ware" will be treated in this study as separate varieties within the Aztec IV Tradition (Smith 1949:12-13).

The San José Aztec IV material is in poor condition as a result of over two hundred years of submergence in salt water. This pitting of the surface which is caused by salt impregnation was also noted in the Pensacola materials (Smith 1965:90). The original pigments have been altered and the paste has become soft and crumbly.

Even though the San José Aztec IV ceramic collection has undergone deteriorating changes, it still constitutes a most important comparative collection for the historical archeologist. Seven forms have been isolated in the present study. These will be described in the following revised type definition.

AZTEC IV POLYCHROME - Type Definition

Paste:

Method of manufacture. Wheel thrown.

Tempering. None noted.

Color. Gray paste.

Form:

Bowl Form 1:	Rim diameter	12.8-15.2 cm.
	Base diameter	7.3-8.7 cm.
	Height of vessel	7.6-8.7 cm.
	Thickness	0.4 cm.

These small bowls have a straight to slightly excurvate rim, a rounded body and an annular foot ring (Fig. 16a).

Decoration:

The vessels are slipped, over which floral and geometric designs are painted in "earth tone" colors. Aztec IV polychrome wares were covered with a cream, pink, red, orange or gray slip. Decorative motifs were painted over this slip in red, black, brown, blue, blue-gray and orange after which the vessel was burnished.

Design:

A number of design elements are present on the Aztec IV ceramics recovered from the San José. The exterior rim edge is bordered by a painted linear band or scalloped horizontal band. The same color is used to paint the horizontal bands on the rim and base in addition to the loop handles (Fig. 10a). No decoration is found on the underside of the base.

The interior rim is banded at the edge with a floral and/or geometric design painted on the remainder of the rim. Unlike the exterior decoration, this usually does not extend to the body of the vessel. Some

pieces contain a simple painted flower or curvilinear design on the interior base. A raised design is present on the interior base in over two-thirds of these vessels. The designs, concentric circles and other geometric and anthropomorphic motifs, are formed by pressing the vessel into a mold prior to firing (Fig. 18,19).

Marks and Inscriptions.

In addition to the common concentric circle raised motif, one interior bowl base contains an unidentified mark (Fig. 17b).

Bowl Form 2:	Rim diameter	12.8 cm.
	Base diameter	5.3-5.4 cm.
	Height of vessel	9.2-9.3 cm.
	Thickness	0.4 cm.

This form is similar to form 1 except that the annular footring is replaced by a slightly pedestalled base (Fig. 16b). The body and rim form are the same.

Decoration:

Same as bowl form 1.

Design:

The decorative motif of these vessels is basically the same as that of form 1. One whole vessel of this form is present in the San José collection (fig. 10b). This bowl has horizontal bands around the rim and base painted in brown, as are the loop handles. The major decorative element, a floral design, is contained on the exterior rim and body, between the horizontal band at the edge of the rim and another band around the lower portion of the body.

The interior of the vessel has a brown horizontal rim band with floral designs around the rim of the vessel. No decoration, painted or impressed, is present on the base of this bowl. However, raised designs are present on the bases of other examples of this form (Fig. 20).

With the exception of the intact specimen, other identifiable examples of this form contain only the base of the vessel. Since the vessel form above the base is similar to form 1 and since the design elements of the intact specimen of form 2 are comparable to those of the whole and reconstructed vessels of form 1, it is assumed that there is no variation in decorative motif as related to these vessel forms.

Bowl Form 3:	Rim diameter	13.8 cm.
	Base diameter	5.2 cm.
	Height of vessel	9.3 cm.
	Thickness	0.4 cm.

This octagonal "squash" shaped bowl has an annular ring foot base and decorative loop handles. The rim of this form is more narrow than forms 1 and 2, with a greater body to rim ratio (Fig. 17a).

Design:

The narrow rim has a scalloped band above a band of dots and a linear horizontal band (Fig. 10c). The body contains painted floral and curvilinear designs in red and white over an orange slipped background. There is a horizontal band around the exterior foot ring. The interior rim lip is banded by a red line with two additional bands within the rim, one in black and the other in red. The interior base has a red geometric design.

One unusual rim sherd of this form has a decorative motif which resembles protohistoric Aztec design elements. The exterior rim is

banded by a horizontal red line with a negative design painted in red below the rim. Other rim sherds of this form contain the same exterior design elements of those found on forms 1 and 2 described above. They are comprised of linear or scalloped rim borders with floral and geometric designs covering the rim and body of the vessel. The interior rims of these vessels often have a characteristic design of blue and black or red and black parallel lines not usually found on the other forms of Aztec IV Polychrome in the San Jose' collection.

Bowl Form 4:	Rim diameter	21.5 cm.
	Base diameter	not available.
	Height of vessel	not available.
	Thickness	0.5 cm.

One rim sherd was recovered from a large bowl.

Decoration:

The vessel was covered with a beige slip over which a painted decoration in red and orange was applied.

Design:

The interior of the sherd contains a raised relief decoration of a Hapsburg double headed eagle surrounded by a foliate motif. The interior rim contains a scalloped rim band in red under which there is a linear band. The raised design is partially covered with orange paint. The exterior rim contains a scalloped band. There is a floral motif in orange and red, similar to those found on other Aztec IV forms, on the exterior body of the sherd (Fig. 10d). European influence has been noted with the introduction of Spanish design and vessel form elements upon the aboriginal Aztec ceramic sequence. The occurrence of the Hapsburg eagle decoration represents additional European influence.

Marks and Inscriptions: None noted.

Miscellaneous forms:

"Rice-bowl" lids

Several pieces are hypothesized to be lids for use with the Aztec IV bowls, which were influenced in form by the Chinese rice bowls with lids (Fig. 11a). The largest is 10 cm. in diameter and 2.5 cm. in height. Smaller examples of the same form were recovered ranging down to approximately 2 cm in diameter. Some of the small forms, used as toys, have a hole drilled near the edge, probably for suspension. Because of the deterioration of the paint, color and decoration are not discernable.

Cojita lids:

Two lids believed to be from small ceramic boxes, called cojitas, were recovered. These boxes were mold-made in two pieces, a base and a lid. Lister and Lister note that: "The two main varieties of boxes were a small round top trunk shape and a rectangular base with flat lid. Both were typical of the eighteenth century" (1976:35). The first is rounded in shape with two 4 mm. holes drilled near the edge (Fig. 11b). The second is rectangular in form with a brown on beige decorated interior (Fig. 11c). This form contains holes drilled on one side, near the edge. Both pieces are in a poor state of preservation with the painted design almost distinguishable. Smith reports a sherd "with a hole in the outer base of the rim made before firing" from the Higgs Site (1949:13). These holes may have been to fasten the lid onto the base.

CHAPTER V

MISCELLANEOUS MEXICAN CERAMICS

1. Figurines:

Ceramic figurines have been recovered from various historical archeological sites in Florida and Mexico (Smith 1972:47-56). Smith reported terracotta figurines from the Higgs Site near Sebastian Inlet (1949) and from Santa Rosa Pensacola, Santa Rosa Island (1965). Similar finds have been reported from Sierra de las Cruces, Mexico (Abelardo 1970) and from an 18th century St. Augustine Site (Shephard 1975).

Lister and Lister note that:

Mexican colonial inventories include many references to ceramic toys whose forms remain uncertain. Perhaps minatures of animals or vessels, which have been recovered occasionally from archaeological deposits, would come in this category (1976:54).

Examples of these juguetes, or ceramic toys were listed in the manifest of the San José. Both zoomorphic and vessel forms are included in the ceramic collection (Fig. 11d,e).

Several human forms are also included in the San José assemblage. These include a small human figurine, wearing a wig of the period. The second form is a human bust which stands 14 cm. high. This female figurine contains holes in the ear lobes, probably for earrings and is most likely part of a doll (Fig. 12a).

2. Ceramic Brick:

Ceramic brick were manufactured in Spain and later in the New World, with masons being brought over on Columbus' Second Voyage to

Hume goes on to state that: "On the basis of this accumulative evidence it seems reasonable to suggest that Rouen faience of the type discussed here was not imported into America until the Revolutionary period..." Rouen faience, however, has been recovered from pre-1776 contexts in St. Augustine (Deagan, p.c.). The presence of this ware aboard the closely dated shipwreck of the San José confirms its presence in the American colonies prior to the Revolutionary War (Fig. 13a).

3. Delft:

Two examples of the Chinese handleless cup form are present in the delft ceramic material. The first design includes eight sherds with a stylized landscape design representing clouds and water in dark cobalt blue (Fig. 13b). The second design is banded at the base in blue with poorly executed design elements.

4. Unidentified Tin-Enamel Ware:

Fragments of one unidentified tin-enamel piece of the Chinese handleless cup form were recovered (Fig. 13d).

5. Lead Glazed Ceramics

Two probable pieces of British lead glaze ware were recovered. The first is from a small straight-sided bowl with a mottled lead glaze (Fig. 13e). A whole brown lead glaze chamber pot was also recovered (Fig. 13g).

6. Stoneware:

A reconstructable large brown salt-glazed stoneware jug is among the ceramics from San José. The jug stands 45 cm. high with a flat base of 15 cm, an applied handle, and an applied lip.

The second brown salt-glaze stoneware piece is in the form of a wide mouth jar. This vessel is whole and stands 13.5 cm. high with a rim diameter of 8.4 cm. (Fig. 13f).

CHAPTER VII

CONCLUSIONS

A descriptive analysis of the San José ceramic material has been presented in this thesis. The need for such comparative studies of historic ceramics has been widely recognized by historic archeologists (Miller and Stone 1970; Goggin 1960; 1968; Lister and Lister 1974). Most ceramic studies in the past have been carried out largely by art historians utilizing museum specimens in an esthetic analysis. These lack an anthropological viewpoint and usually do not include the more common ceramic wares: "Ordinary ceramics, used in everyday life and found in abundance in archeological sites seem to be completely ignored" (Goggin 1968). Miller and Stone also discuss the need for comparative ceramic studies in their analysis of the ceramic collection from Fort Michlemakinak:

"...The identification of some eighteenth century ceramic types, for example, is difficult owing to the lack of adequate descriptive reports. The archeologist often is forced to refer to ceramic publications, catalogs, or collection indices which identify only the best specimens of select ceramic types. Unfortunately, these "museum quality" items are found infrequently in an archeological context. Furthermore, the descriptive criteria presented in many of the published sources are seldom helpful" (1970:1-2).

The advantages offered by underwater shipwreck sites have been discussed in chapter three. These include the superior state of preservation of cultural materials and the closed context, i.e. the "time capsule" nature, of the site. For these reasons, the shipwreck site is of great comparative value to the historical archeologist. Like the material

colonies. Stone has utilized porcelain as a status index through the study of seventeenth and eighteenth-century Massachusetts inventories and discusses the occurrence of overlay decorated porcelain. The translation of the San José Manifest would have revealed important data, comparable to the quantitative data found in these inventories. Unfortunately, funds were not available for the translation of this document.

Since Smith's definition of the ware in 1949, little additional information has been published on Aztec IV Ware (1949:12-13). Aztec IV has been recovered from Florida Spanish Colonial sites, but as with porcelain, only small quantities of fragmented sherds are usually recovered from terrestrial sites. The San José collection represents the most extensive assemblage of this ware reported to date. Because common utilitarian forms are absent in this collection, the hypothesis that Aztec IV represents, in Spanish sites, a novelty ware manufactured for Spanish export is strengthened (Smith 1949:12-13).

Aztec IV marks the introduction of Spanish floral designs and vessel form to an aboriginal pottery tradition. It is hypothesized that the ware might serve as an index to the process of acculturation of the aboriginal Mexican population. An analysis of the stylistic evolution of Aztec IV ceramics as a combination of Spanish and aboriginal attributes is necessary to support or reject this hypothesis. It is further suggested that this innovation will occur first in urban, trade-oriented sites, where the amount of cultural contact between aboriginal population and European migrants was high, and will be followed by stylistic change in the rural areas of Mexico. This pattern of urban to rural diffusion has been demonstrated in the stylistic changes in gravestones of New England (Deetz and Dethlefsen 1967:29-37).

In addition to the use of Aztec IV ceramics as an acculturation index of aboriginal Mexicans, the ware might serve as an index of the aboriginal influence on Spaniards. Smith notes that acculturation is two-way in nature and suggested that aboriginal ceramics were used by the Spaniards (Boyd et.al.1951:155-156)..

The San José majolica assemblage includes all of Goggins' majolica traditions. The presence of this sequence at a single component site seems unusual since these traditions represent a temporal sequence, thus indicating a need for a revision of Goggin's suggested majolica chronology. Goggin formulated this sequence during the infancy of Spanish Colonial archeology, prior to the extensive excavation of St. Augustine sites and the recovery of a large quantity of data from Spanish shipwreck sites. As a result of the closed context nature of the shipwreck site, they offer an excellent opportunity to formulate such a revised chronology. Based on the presence of Columbia Plain escudilla bowls on the San José and the recovery of Columbia Plain from various other post-1650 sites discussed in chapter three (Goggin 1968; Smith 1949; Deagan 1974, 1976; Shephard 1975), the suggested end date of this ware is minimally extended to 1733.

Other Mexican ceramic wares were recovered from the San José which occur infrequently in Spanish Colonial land sites. These include ceramic toy figurines called jugetes, ceramic bricks or ladrillos, and redware ceramic discs. Mexican lead glaze ceramic vessels occurred in small amounts in the San José collection. Larger amounts of these lead glaze wares are usually recovered from Spanish Colonial land sites (Deagan, personal communication). Unfortunately, as was previously discussed, no comparative porportional statements can be made utilizing the San José

assemblage.

Non-hispanic European ceramics include faience, delft, stoneware, and British lead glaze wares. The presence of Rouen faience demonstrates that this ware was introduced into the Spanish American colonies earlier than the introduction date suggested by Hume. Although a trade embargo was in effect with France and Britain, ceramic materials from these countries were present on the San Jose. These may have been acquired through trade at a free port or may suggest that the trade embargo with these countries was not strictly enforced.

It is hoped that this study will shed light on Hispanic ceramics of the early eighteenth century. In addition, questions have been raised which suggest future lines of research. The opportunities available through the study of data retrieved from Spanish shipwreck sites are mentioned in the text above. South discusses the need for the quantitative analysis and pattern recognition in explaining the dynamics of past cultural systems (1977:31-45). Data retrieval on this level will become possible only through the implementation of systematic shipwreck excavation. As a result of recent changes made in the state of Florida's shipwreck salvage program, basic data recovered from these shipwreck sites should increase our understanding of Hispanic America.

APPENDIXSHIPWRECK SALVAGE VS. UNDERWATER ARCHEOLOGY

The lack of an anthropological orientation by the professional salvors was evident throughout the salvage of the San José. The wreck was salvaged by divers untrained in archeological theory and techniques under the supervision of a professionally trained archeologist and minimally trained field personnel. The archeologist, however, did not have the legal authority or budget to conduct systematic excavations and in his absence the salvors recovered materials of high resale value while ignoring others of cultural importance. For this reason the artifactual collection is skewed toward those materials of greater commercial value rather than the collection of a cultural material assemblage reflecting behavioral patterns of the eighteenth-century Spanish mercantile industry.

Anthropologically oriented archeologists are described by Watson et al as: "...anthropologists who have developed techniques and skills focused on the explanation of past human behavior as it is preserved in the archeological record" (1971:161). In this same vein, Goggin discusses the importance of an anthropological orientation. He defines underwater archeology "...as the recovery and interpretation of human remains and cultural materials of the past from underwater by archeologists." Goggin continues: "The problems surrounding cultural materials underwater are just as significant as those on land and they should be handled by trained archeologists, not by sport or professional divers."

Stringent requirements, necessary in the scientific excavation of

an underwater archeological site, were lacking in the salvage of the San Jose. Salvors were not required to make intra-site maps or to take photographs of articles in-situ and upon surfacing. A systematic data recording system was not employed to catalog materials and to record their provenience. In addition to this lack of scientific methodology, certain destructive excavating systems were utilized to conduct salvage operations.

Prior to the involvement of the State of Florida, eight-inch airlifts were used in the recovery of artifacts. The airlift is a suction hose into which air is pumped through a hose from the surface (Bass 1966:116). The air entering the hose at the base rises upward through the tube acting as an underwater "vacuum cleaner," sucking up sand and artifacts and depositing them on the surface. The device is useful in the removal of overburden sand and silt from the wreck-site. Its use, however, should be applied cautiously, since it is potentially destructive to unstable materials and provenience control data:

The air lift can be quite powerful and must be used with care. Except for trenching in areas thought to be devoid of archeological interest, it is best operated by keeping its mouth a few inches away from the bottom of the sea, while sweeping sand gently toward it by hand. Thus the danger of breaking fragile wood is eliminated and most small artifacts can be noted and placed aside before they take the potentially dangerous trip up through the pipe. It should also be remembered that the original position of any object airlifted from a site is lost, even if the object itself is retrieved later (Bass 1966:116).

Unfortunately, caution was not employed in the airlift operations of the San Jose. The airlifts were responsible for the destruction of a large amount of cultural materials.

The second system which was consistently abused by treasure hunters is the "blower" or "blaster." This device diverts the propwash from the

salvage vessel downward creating a current which is useful in removing the sterile overburden from the wreck site. This device, however, can also be destructive when not used with caution: "One medium-sized unit can move an estimated 100 to 200 cubic feet of sediment per minute with a force requiring an observer to hold fast with two hands to some solid object to maintain position" (Clausen 1967:98). The destructive effects of this device on unstable cultural materials is obvious. In addition to the damage to cultural materials, these blasters pose a threat to the surrounding marine environment:

One salvor bragged that his twin, 26-inch prop-blasters can dig a hole 30 feet wide and 20 feet deep in 30 feet of water depth. This is potentially more destructive to marine life than dynamite. And the dredged up silt is more damaging to corals than blasting gelatin. Yet, treasure-hunting boats were permitted to blast holes all over the ocean bottom wherever a wreck location was suspected...

Needless to say valuable historical artifacts such as ceramics, art objects, and fragile items were destroyed, and virtually all evidence of archeological significance was lost" (Barada 1975:59).

The following description is given of the use of the blaster during the salvage of the San José:

Gurr's blaster looked like a giant ventilator off an ocean liner. The L-shaped pipe pivoted down over the salvage boat's propellar until its eight-foot-wide mouth was pointed toward the bottom. Gurr cranked up El Capitain's engine to 2,000 rpm and the swirling column of water stirred up a milky cloud of bottom sediment to swirl around the boat in an ever widening gray swatch that spread out into the blue Atlantic.

Normally a crew might run a blaster for five minutes, then go down and pick up artifacts, but Gurr was operating differently. He was letting the powerful excavator run for a half hour...Working under the blaster with the engine cut down to 1,600 rpm is roughly akin to picking you way through a sand storm while whirlwinds buffet you about, but Gurr was oblivious to it all as he found himself among hundreds of pieces of wreck debris, most of it broken ceramic crockery (Burgess 1974: 66).

It is obvious from this description of methods that this type of salvage operation is not compatible with scientific archeology.

In addition to these problems of methodology and the lack of an anthropological orientation, serious legal problems arising out of the salvage operations and the deposition of the material subsequent to these operations suggest that major changes were needed in the legal structure of the state's underwater salvage program. These legal questions and the evolution of the state's salvage program, however, are beyond the scope of the present discussion and will not be dealt with here.

There remains the basic question of the economic feasibility of conducting a profitable shipwreck excavation while employing a scientific archeological perspective. Peter Throckmorton summarized the problem: "The only way to make a profit is to dynamite a wreck, collect whatever is of value, and get out fast" (1969:125-135). Bill Barada also addresses the treasure salvage vs. underwater archeology dilemma:

In contrast, the treasure salvor is usually in a business venture, often with financial backers who are only interested in the profit to be realized from their investment. To these people the painstaking, methodological work and record-keeping which is essential to scientific investigations are a waste of time and cost so much money they could lead to bankruptcy: (1975:58).

This incompatibility is stressed in South's discussion of the salvage of the Mary Bowers:

...Although several states now have established procedures whereby salvage diving is carried out, the realities of salvage goals, to my knowledge, have always prevailed over those of data recovery. Therefore, the interests of the states in such operations have always come out second place to the goals and interests of the divers, regardless of how much their goals have been oriented toward data recording. Because of this situation, individuals and agencies representing the states are becoming accustomed to the recovery of artifacts from shipwrecks without the accompanying

provenience drawings, photographs, observations, etc. characteristic of the process that is archaeology (South 1969:110).

During a period of increasing recognition of the need of cultural resource management of archeological sites by state and federal governments, it is difficult to comprehend that such abuses of the state's non-renewable cultural resources continue to be condoned by the people. "There has been a burgeoning movement both among archeologists and the land owners, and managers to emphasize consideration of archeological resources in terms of their management and preservation rather than strictly as sources of scientific data and artifacts with market and exhibit value" (Fischer 1976:1). This movement, however, has been slow to develop in regards to underwater archeological sites. The fact that these sites remain unprotected from destruction by professional treasure hunters represents a near-sighted view from the stance of cultural resource management.

It has been noted that the state of development of underwater shipwreck recovery is comparable to the antiquarian period in which relics were collected with no attention paid to contextual relationships and cultural processes:

...Surely we do not have to go through the same painfully wasteful process in our exploration and recovery of information from sunken time capsules as we did in those infant days of the exploration of the "historical" and "archaeological" treasures lying on the bottom of the seas; we are headed down that very same pathway! (South 1969:111).

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FIGURE 1

Map of Florida Showing
Plantation Key.



SAN JOSÉ

FIGURE 2

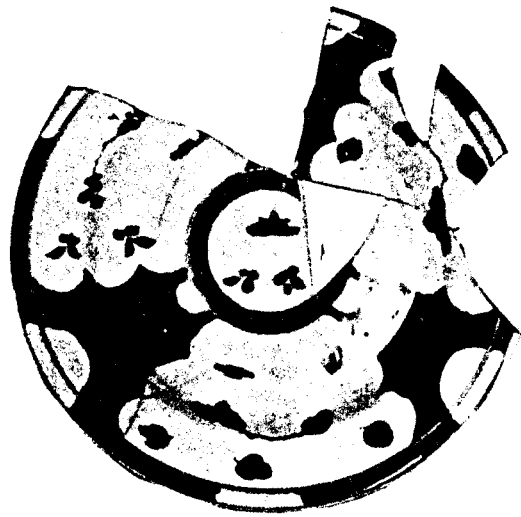
Map of Excavation:
Underwater Exploration Project,
Smithsonian Museum of History
& Technology.



FIGURE 3

Porcelain

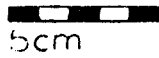
- A. Porcelain plate, Form 1, design 1.
- B. Porcelain plate, Form 1, design 2.



A



B



5cm



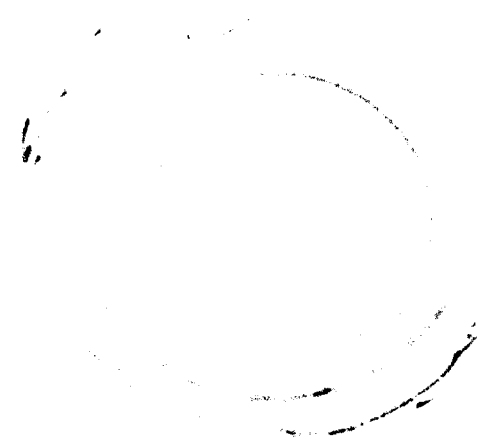
FIGURE 4

Porcelain

- A. Porcelain plate, Form 1, design 3, interior.
- B. Porcelain plate, Form 1, design 3, exterior.
- C. Porcelain cup, Form 1.
- D. Porcelain cup, Form 2, design 1.
- E. Porcelain cup, Form 2, design 2.



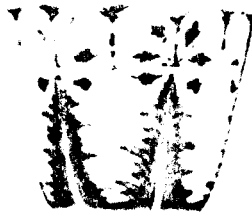
A



B



C



D

5cm



E

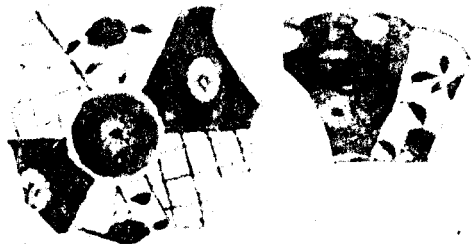
FIGURE 5

Porcelain

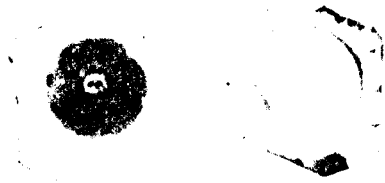
- A. Porcelain plate, Form 2.
- B. Porcelain bowl, Form 1.
- C. Porcelain cup.
- D. Porcelain rice bowl lid Form.
- E. Porcelain bowl Form 2: barber's bowl.



A



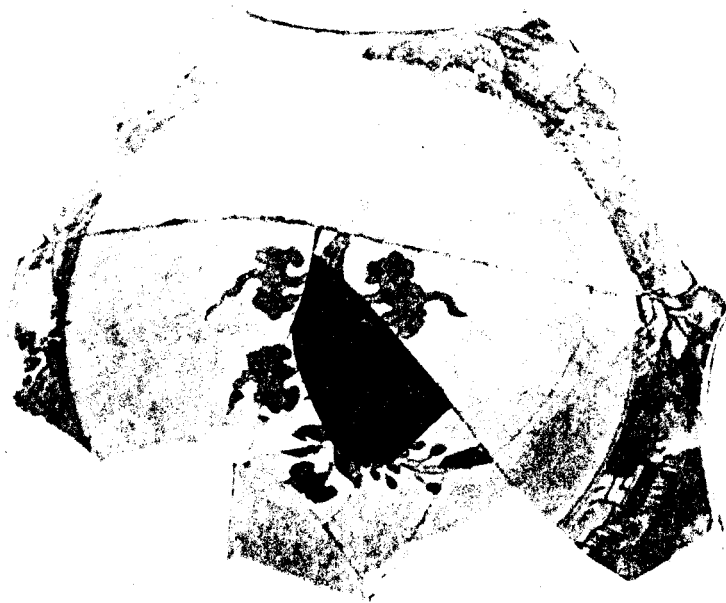
B



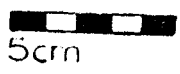
C



D



E



5cm

FIGURE 6

Porcelain

- A. Porcelain case bottle: note overlay design.
- B. Porcelain case bottle.
- C. Porcelain case bottle; interior: note cloth impression.
- D. Porcelain case bottle: threaded pewter cap.



A



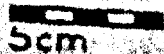
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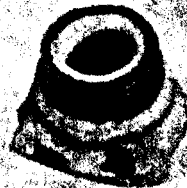
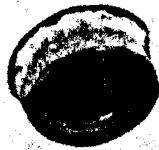
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C



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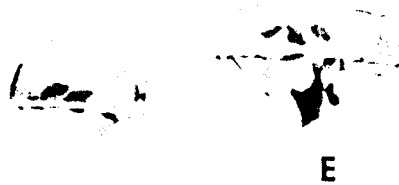
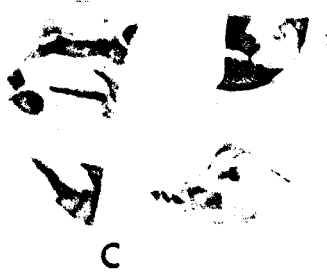
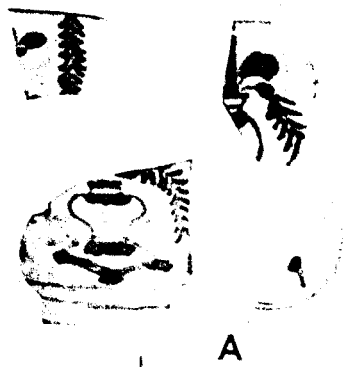


D

FIGURE 7

Porcelain

- A. Porcelain cup Form 2, design 3
- B. Porcelain cup Form 2, design 4
- C. Porcelain cup Form 2, design 5
- D. Porcelain cup Form 2, design 6
- E. Porcelain cup Form 3
- F. Porcelain cup Form 4
- G. Porcelain cup Form 4



5cm



FIGURE 8

Majolica

- A. Columbia Plain escudilla bowl.
- B. Puebla Blue on White pocillo cup.
- C. Chinese-Popular Tradition bowl.
- D. Chinese-Popular Tradition pocillo cup.
- E. Italian-Talavera Tradition barber's bowl.



A



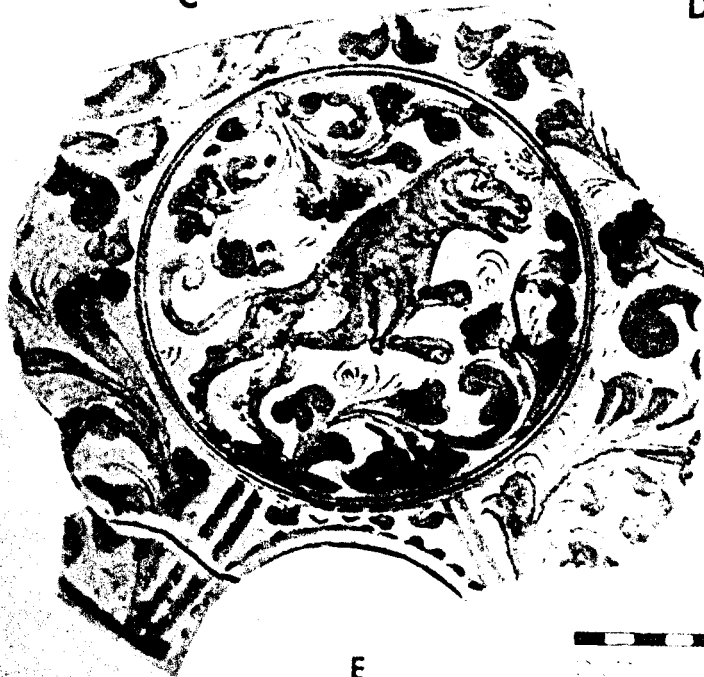
B



C



D



E

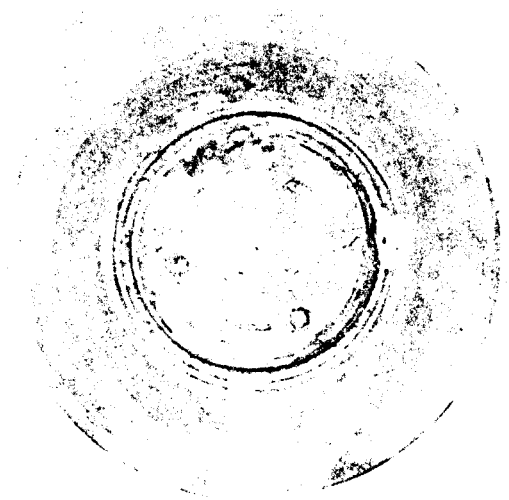
FIGURE 9

Majolica

- A. Puebla Blue on White plate, design 1: interior
- B. Puebla Blue on White plate, design 1: exterior
- C. Puebla Blue on White plate, design 2.
- D. Puebla Blue on White plate, design 3.



A



B



C

5cm



D



A



B



C

5cm



D

FIGURE II

Mexican Ceramic Wares

- A. Aztec IV "Rice-bowl" lid.
- B. Aztec IV cojita lid.
- C. Aztec IV cojita lid.
- D. Ceramic Figurines
- E. Mexican ware vessel
- F. Redware discs.

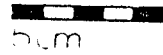
FIGURE 12

Mexican Ceramic Wares

- A. Ceramic Figurine .
- B. Ceramic brick, ladrillos.



A



B



C

FIGURE 13

Non-Hispanic European Ceramics

- A. Rouen Faience.
- B. Delft.
- C. Frence Faience.
- D. Unidentified tin-enamel.
- E. British leadglaze ware.
- F. Saltglazed stoneware jar.
- G. Leadglaze chamber pot.

FIGURE 14

Majolica Vessel Forms

- A. Chinese-Popular Tradition bowl, Form 2.
- B. Pocillo Form.
- C. Columbia plain escudilla bowl.

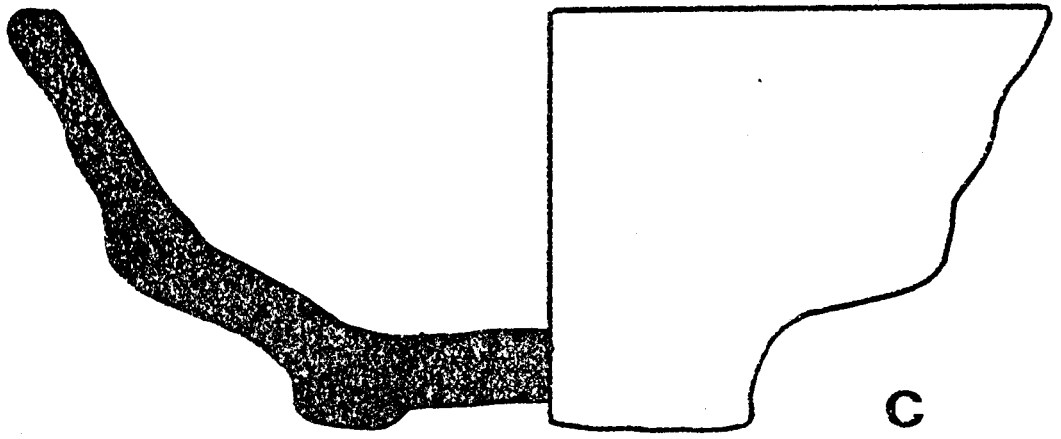
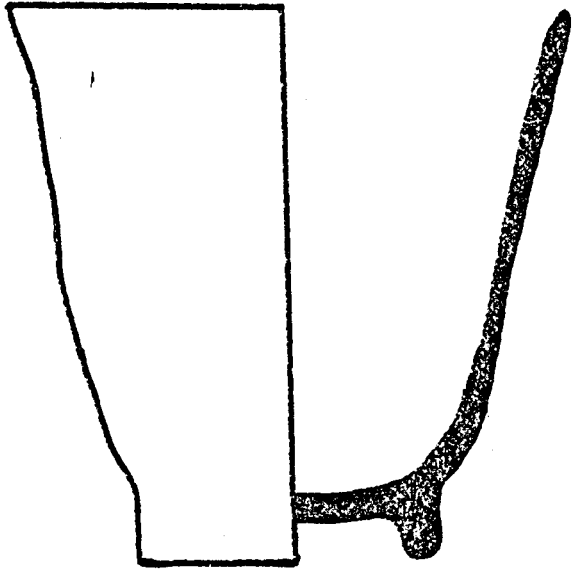
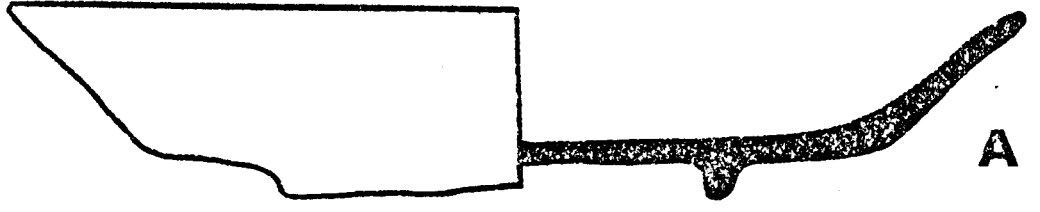
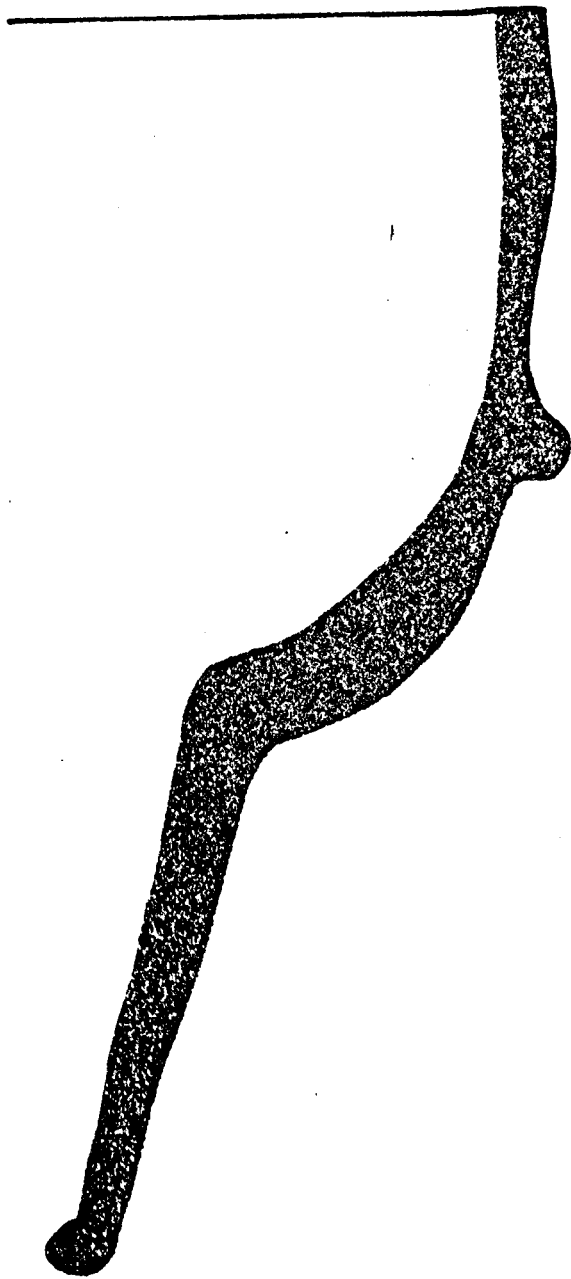


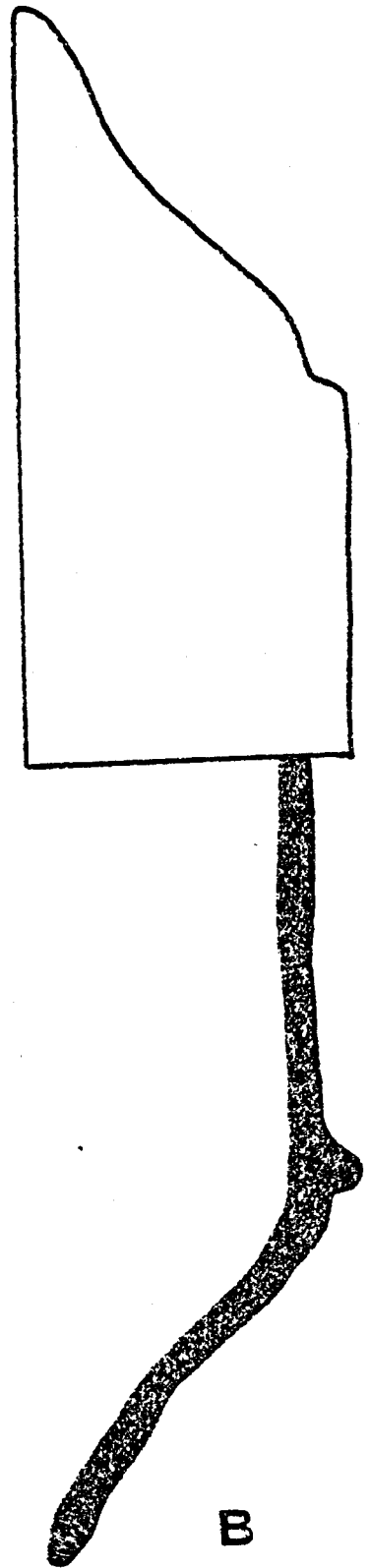
FIGURE 15

Majolica Vessel Forms

- A. Barber's bowl.
- B. Puebla Blue on White plates.



A



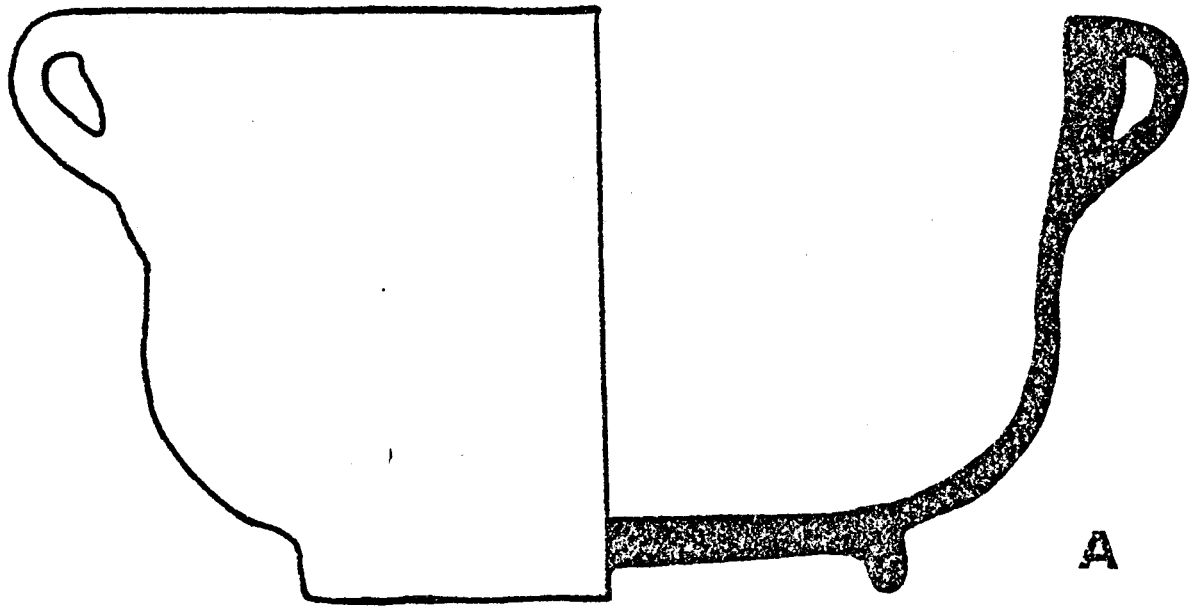
B

FIGURE 16

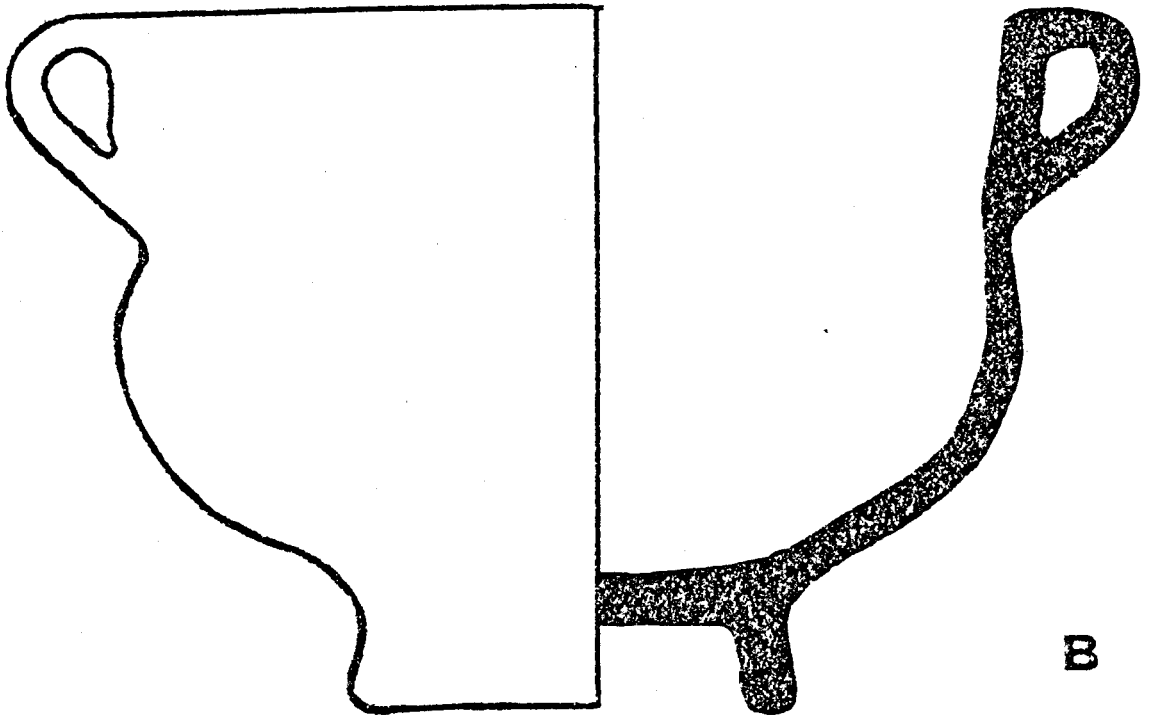
Aztec IV Ware Vessel Forms

A. Aztec IV Bowl Form 1.

B. Aztec IV Bowl Form 2.



A



B

FIGURE 17

Aztec IV Ware Vessel Forms

A. Aztec IV Bowl Form 3.

B. Aztec IV, Form 1: raised mark.

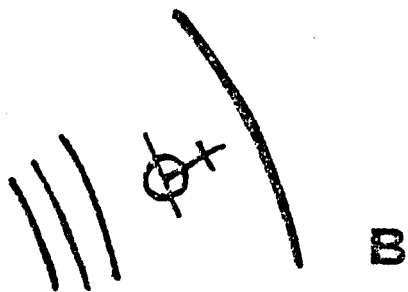
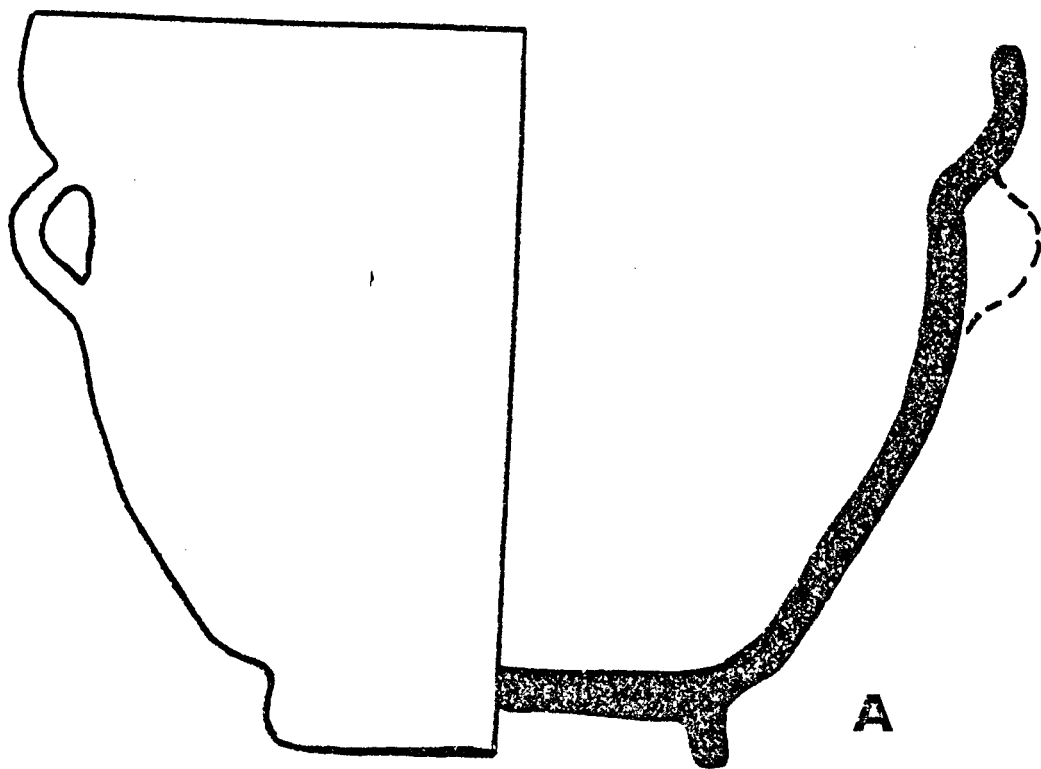
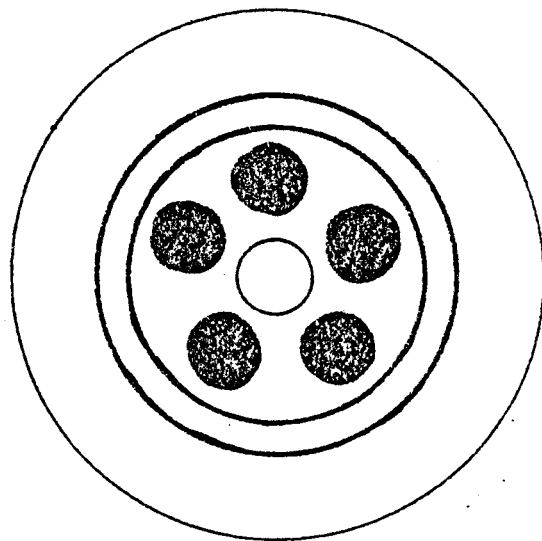
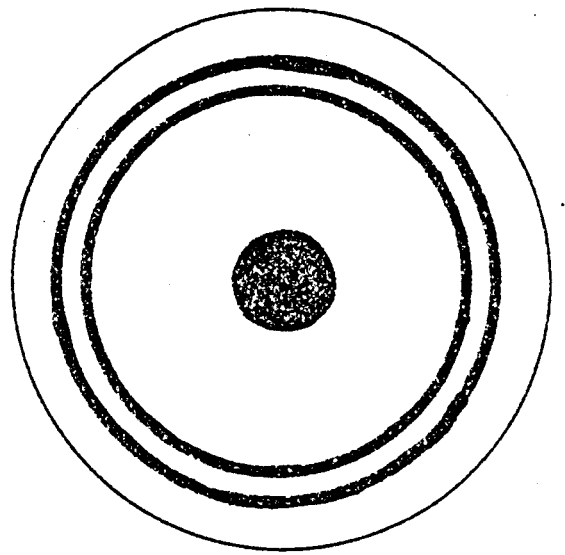
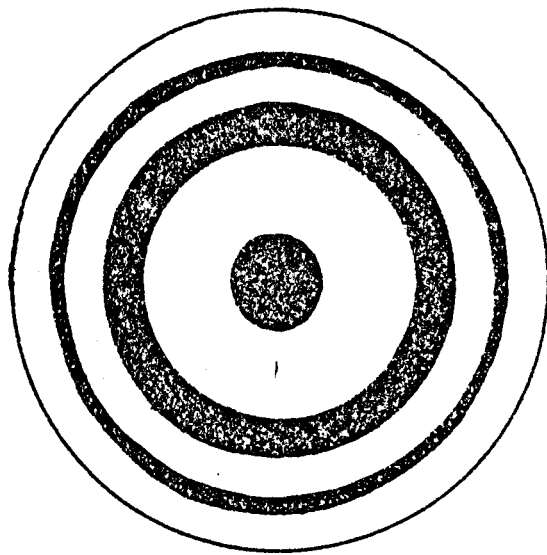


FIGURE 18

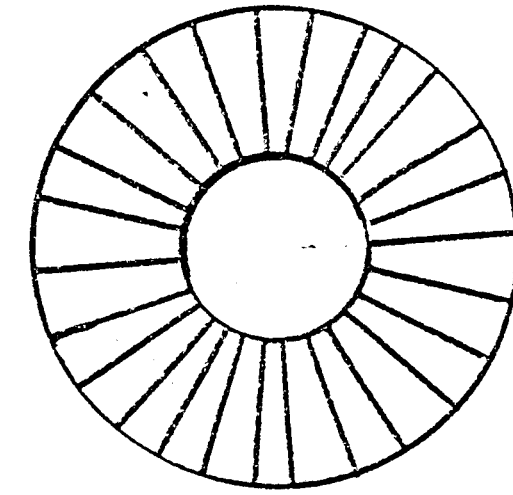
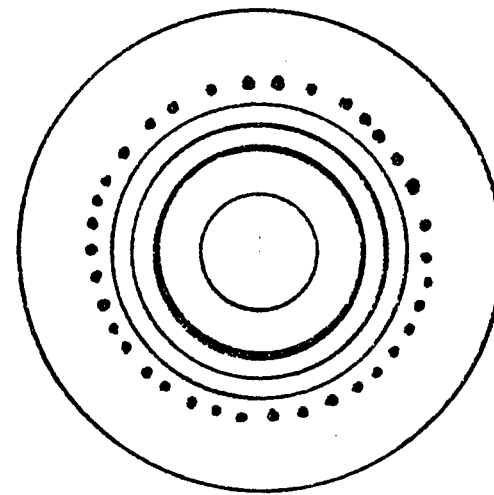
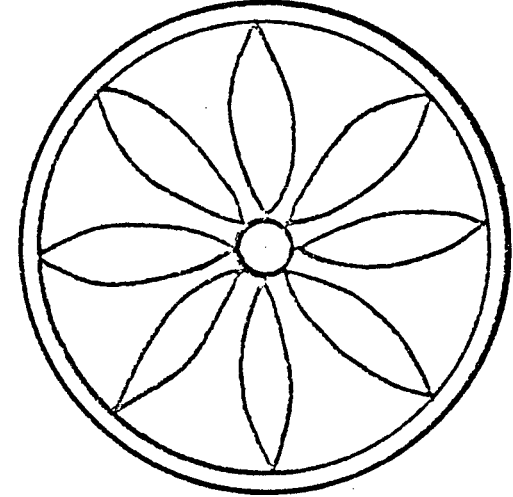
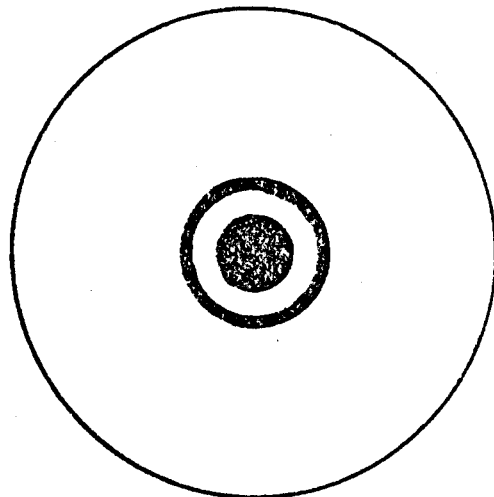
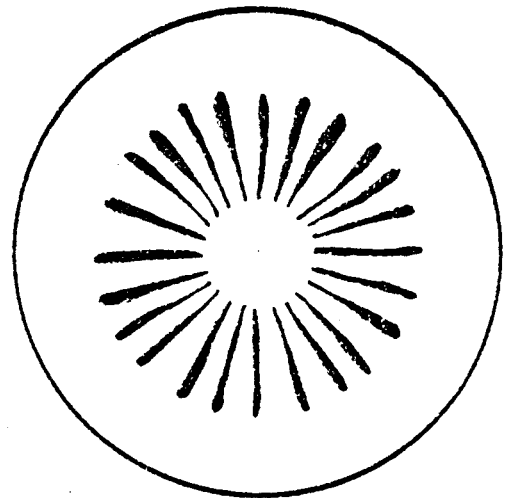
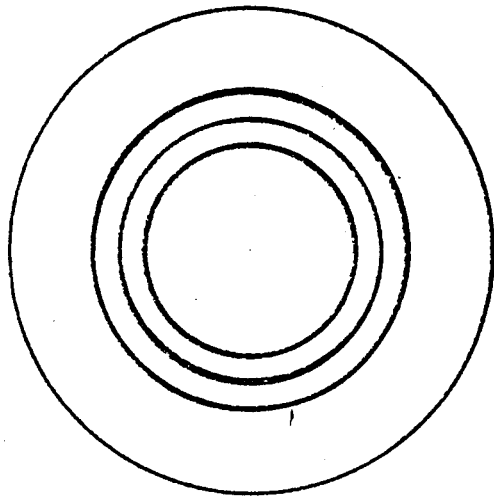
Aztec IV Ware Raised Designs:
Raised designs found on interior
of vessels, Form 1.



0 5cm

FIGURE 19

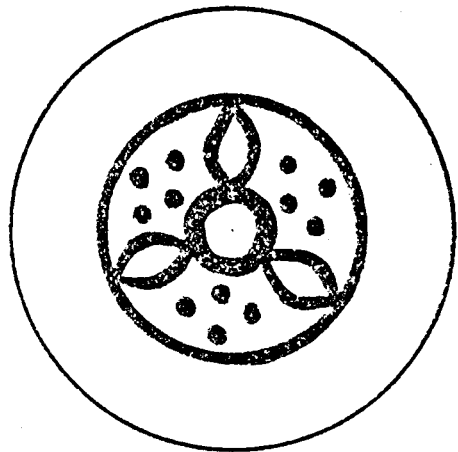
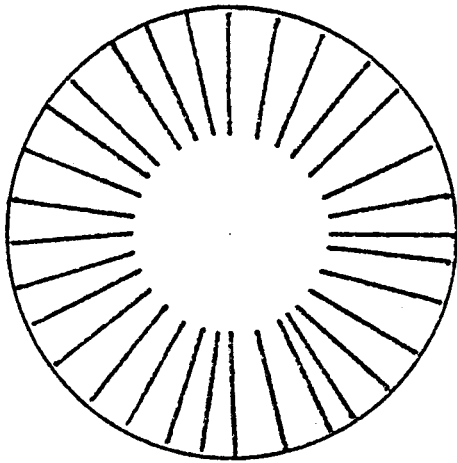
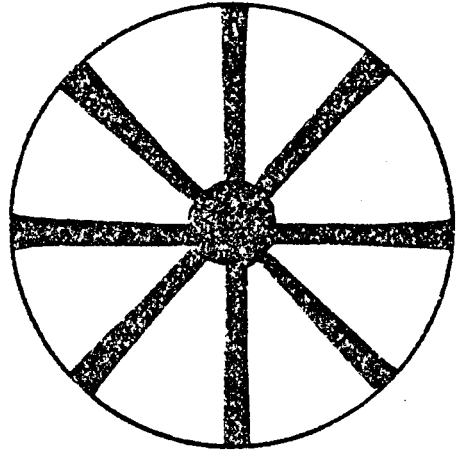
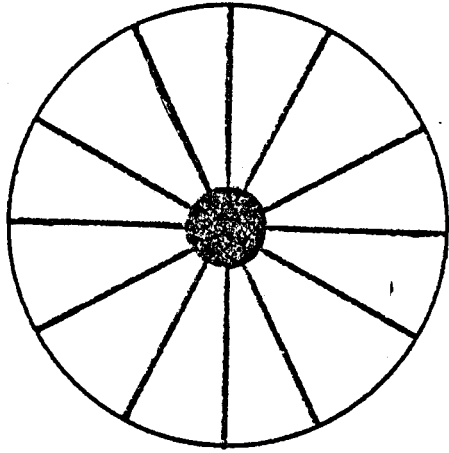
Aztec IV Ware Raised Designs:
Raised designs found on interior
of vessels, Form 1.



0 5 cm

FIGURE 20

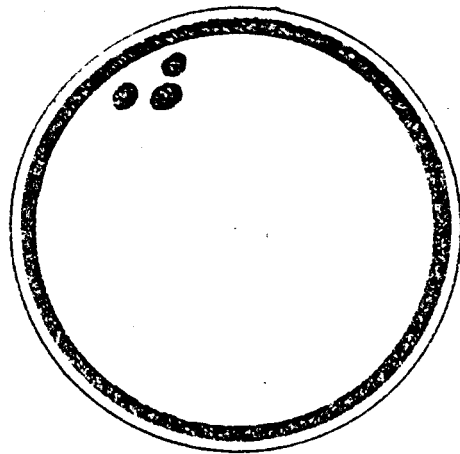
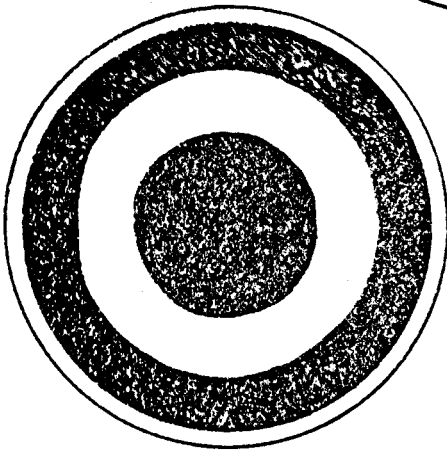
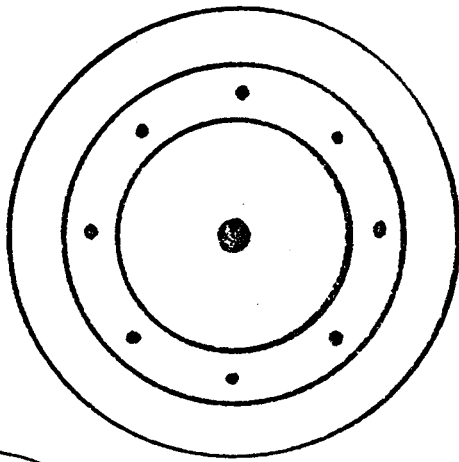
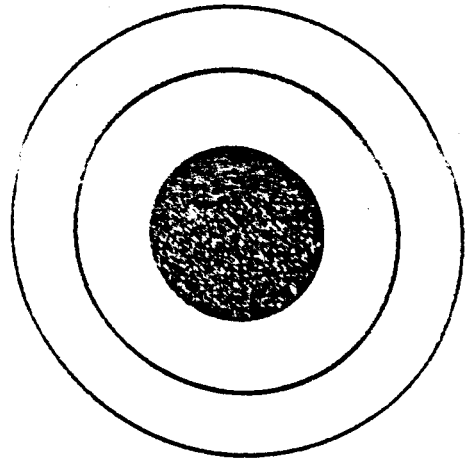
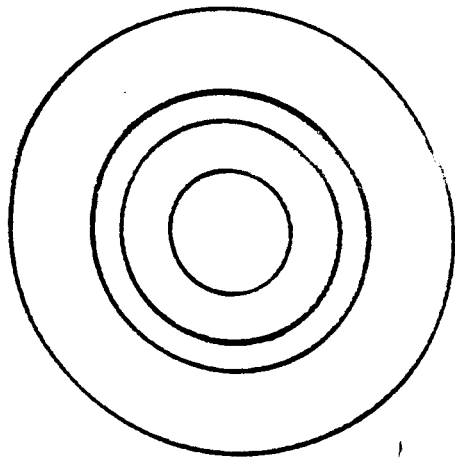
Aztec IV Ware Raised Designs:
Raised designs found in interior
of vessels, Form 2.



0 5cm

FIGURE 21

Aztec IV Blackware Raised Designs:
Raised designs found on interior
of vessels.



5 cm

Handwritten signature

ER

In November I received a letter from Toyota saying that it was repairing burned valves on the 1972 or 1973 Coronas, Celicas and Hi-Lux trucks. It seems the company recommended an improper fuel which caused these models "to experience valve-burning" problems. It happens that I had my valves replaced before receipt of that letter and paid for repairs. Now I feel I should get my money back.

Toyota of Tallahassee agreed and told me to send copies of my repair invoices to Southeast Toyota Distributors in Jacksonville. I did. But I have heard nothing since then. Can you get the company to repay me? K.M.

You'll have no problems getting your money. The Jacksonville distributor sent a request to the California office in November, asking for reimbursement of \$190.17. You hadn't been notified because Jacksonville has been swamped with letters like yours, says Ron Mobley, the Jacksonville customer relations manager. He will call you to verify that the money will be forthcoming.

Mobley says the Environmental Protection Agency required use of lead-free gas and it is thought that such gas might be the cause of the valve problem. Toyota is advising its buyers on the proper type of fuel to ensure no further problems.

Action Line

I'm 20 years old and I would like to find work in Tallahassee. I want to go to some kind of school but I'm not very good at math or other subjects. I need help. I'd be a good waitress. And I'd work hard. Please, Please contact me. V.G., Thomasville

An application for employment is on the way to you from McDonald's. A spokesman said the chain often has openings — more so if can work in other than the 9 a.m. to 5 p.m. kind of shift. There are plenty of schools you can attend in Tallahassee when you come. Call the Leon County adult education program office at 487-1414. Good luck!

Carter has 'too much salt'

LOUISVILLE, Ky. (UPI) — The head of the Kentucky Southern Christian Leadership Conference told blacks during the weekend to "watch the peanut farmer, and remember where he comes from," in a reference to President-elect Jimmy Carter.

"He's from Georgia," the Rev. Charles Kirby, Kentucky president of the Southern Christian Leadership Conference, told a memorial banquet for Dr. Martin Luther King Jr. "It looks like his administration has too much salt and not enough pepper."

The Rev. Mr. Kirby, a Baptist pastor, said that blacks should keep close watch on the incoming administration to see that "We get our portion."

"We need jobs, not promises," the minister said. "Every president who

gets in office promises to do so much for us but when they get in they start telling us things are getting better.

About 400 persons attended the King banquet, and heard Kentucky's three black legislators praised for their work on behalf of black people.

A telegram was read from Sen. Walter "Doc" Hollister, D-Ky., pledging support for a Senate bill to make Dr. King's birthday a national holiday. The state civil rights leaders' birthday already is an official state holiday in Kentucky.

Also appearing at the banquet was the Rev. Fred Taylor, Atlanta, a former aide to Dr. King and an official of the SCLC. Taylor said he believes blacks will "give Carter a chance," but "if he doesn't deliver on his promises, we should demonstrate against him."

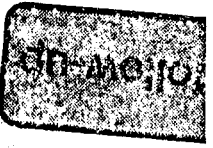
Tallahassee Democrat

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