banded or corrugated with a few narrow, polished coils just below the neck. The source of this type is probably not directly from Alma through the local manifestation, but rather indirectly through a nearly identical type, the Alma-derived Tularosa Fillet Rim made in the White Mountains of Arizona and the upper Gila in New Mexico. A type similar to Los Lunas in the same area, and perhaps a variety of it, is Pitoche Rubbed-ribbed. On Pitoche the clapboard corrugations at the neck are not intended, but are nearly obliterated by rubbing and polishing. Mera (1935) believed Pitoche to have influenced two related types found in our area of the southern Salinas and the upper Tularosa Basin, which he named Corona Rubbed-ribbed and Corona Rubbed-indenteted. These types employ a technique borrowed from Los Lunas and Pitoche and applied to a paste and shapes much more reminiscent of the earlier indigenous Jornada Brown.

SherdS identical to Mera’s type collection of the two kinds of Corona came from Mound 7. These are, respectively, jars of clapboard and indented corrugated on which the evidence of the coiling was somewhat obscured by rubbing while the clay was still wet. But because corrugated pottery in the mound came in all possible gradations, from unrubbed to the near obliteration of coils, without any recognizable change in shape or temper, I have chosen to consider it as a single type, Corona Corrugated, subject to considerable variation in surface treatment. For a later version with a completely smoothed surface, I have employed the name Corona Plain. Both types of Corona—30,643 sherds—made up 32 percent of all the sherds from the site.

**Corona Corrugated**

The following description is based on two nearly complete vessels and 3,602 sherds from the excavations in and near Mound 7.

**Range:**

Gran Quivira seems to be near the center of the area of distribution, but the precise borders are not known. The pottery is found at least as far east as the mouth of Gallo Canyon on the east slope of the Gallinas Mountains, where Mera’s type site for Corona Rubbed-ribbed (LA:1268) is located, and it appears on Glaze A sites in the northern Jornada del Muerto to the west. Caperton’s survey of Chupadero Mesa and the adjacent Médanos shows it to cover all of that area (Caperton, 197-), but it probably does not extend below the south end of the mesa, as the unnamed smudged corrugated described by Lehmer for the Jornada and the Alamogordo area seems to be something else. Quarai is inside the range of the type, but Paako at the north end of the Sandias is not. Probably the change, however subtle, to something distinguishable occurs at the north end of the Estancia Valley.

**Dates:**

Some sites recorded by the survey produced Chupadero Black-on-white with Jornada Brown, but no corrugated. Corona Corrugated was found with Chupadero at later jctal sites where no glazed paint wares appeared (Caperton, 1980), and both were found with the early glazes in the Early Phase at Mound 7. These associations indicate that corrugated pottery was introduced after Chupadero Black-on-white, but before Agua Fria Glaze-red—or between the late 1100’s and the early 1300’s. Somewhere in the first two decades of the 1200’s would be a close guess for the beginnings of the type.

Evidence of the evolution of corrugated to Corona Plain can be seen in Mound 7. The earliest trash deposits in the excavation were the fill of the cisterns. In those levels containing no glaze later than Agua Fria, Corona Corrugated made up 90 percent of the brown utility sherds. The few sherds counted as Corona Plain could just as well have been smoothed sections near the bases of corrugated jars. In the lower strata of Test Trench 1, which was dominated by the early glazes but where both Glazes C and D were present in small but equal numbers, corrugated had dropped to just 13 percent of the culinary sherds. In Kiva L, where Glaze D was the latest pottery in the lower fill and on the floor, only 2 percent of the culinary ware was corrugated. Glaze B (Largo Glaze-red) and Glaze C (Espinoso Glaze-red) were both manufactured for relatively short periods, and neither was traded into Las Humanas in great quantity. There is no isolated provenience in the mound with sufficient numbers of sherds for safe deductions to be made where either type is definitely representative of the level. But a single Largo sherd on the floor of a Feature 1 room below Room 103 is the latest type of a total of 213 sherds. In this lot, the utility ware is corrugated. Because plain ware is already quite dominant in the earliest levels where Glaze D (San Lázaro) is present, it might be reasonable to assume that the transition to smoothed cooking pots took place during the period when the intervening Espinoso was made—or sometime between 1450 and 1490. It remains a possibility that it started late in the Largo period, which would place it perhaps 20 years earlier. Thus, a time range for Corona Corrugated of about A.D. 1225 to about 1460 is indicated.

**Paste:**

Corona is made of a crumbly paste which fires to a tan, buff, or reddish-brown color. Because of the unintentional smudging received on slow cooking fires, many sherds are gray to black on the exterior, but the core reveals the original color. The thickness of 100 sherds ranged from 4 to 9 mm., averaging 5.1 mm.

The clay was tempered with medium to coarse crushed rock, usually used abanduntly. Warren (1980) found, surprisingly, that 57 percent of the corrugated sherds she examined were tempered with quartz mica schist, 25 percent with angular quartz grains and white feldspar, and only 10 percent with biotite felsite from the local igneous sills. The source of the first two materials is unknown, but neither is found within 15 miles of Gran Quivira. Although it is remotely possible that stone was carried into the pueblo for use as temper, this seems unlikely in view of the apparent suitability of the plentiful local igneous rock. More probably, the pottery was imported.

**Surface treatment:**

The exteriors all exhibit some traces of the original corrugation which ranges from rare examples of simple, unindentated clapboard bands in the old Pueblo I style to narrow, indented corrugations. The latter were usually carelessly done with coils of uneven width, and the indentations were random—not regularly placed with regard to the indentations on the coil below—thus, the pleasing, spiral, patterned effect achieved by
potters in the Anasazi heartland was lacking. Coils of 100 measured sherds ranged from 3 to 11 mm. wide and averaged 5.5 mm.

While the clay was still moist, the vessel was rubbed horizontally with the palm or was casually scraped to flatten the ridges, sometimes to the point of blurring the demarcation between separate coils. The rubbing was often more intense near the bottom with the coils nearly obliterated. The lower third of many jars was purposefully scraped and smoothed to contrast with the corrugated area above. One sherd was from a jar that had been washed with a fugitive red paint.

The interiors were scraped smooth, with about 60 percent also polished and smudged. Smudging was probably done by inverting the pot over a slow-burning fire with a reduced oxygen supply. The resulting color, which varied with the amount of carbon absorbed by the clay, ranged from a light gray to an intense, deep, jet-black.

Shape:

Only jars were seen in the sherds, and both of the complete vessels were jars. One of the vessels was half of a small jar only 15.5 cm. high (fig. 86). It is atypical in size and may be in shape as well. The second specimen was larger, but the sherds were so friable that it was unrestorable. The only restored Corona Corrugated jar I have seen is that in Figure 87. It was excavated by Park Archeologist Douglas H. Scovill from the floor level of a small adobe house just south of the visitor center at Gran Quivira. The association was Chupadero Black-on-white in a pre-glaze occupation. The egg shape is typical of Pueblo II corrugated in the northwest part of the state. This specimen measures 40.0 cm. high by 40.6 wide and the mouth interior is 25.4 cm. across. The less dependable evidence of the sherds suggests that its shape is typical.

Rims are short, tapered, slightly flaring, and with rounded lips. Rarely are they corrugated to the lip, but most rims are made of a single, smooth fillet of clay. Small, vertical loop handles just below the rim were seen on two sherds.

Corona Plain

The gradation of rubbed-rubbed to rubbed-indentured to completely smoothed is so fine that it is difficult to select points for arbitrary divisions. I have dodged part of that responsibility by lumping Mera’s types under the term ‘corrugated,’” but have recognized a separation at the latter end of the scale. Vivian (1964) described the smoothed culinary brown ware from House A as the culmination of Corona Rubbed-indentured. The same pottery made up 37 percent of the sherds from the Pueblo Pardo excavations where the excavators recognized it as a thing apart but referred to it as “unnamed, plain, smoothed” (Toulouse and Stephenson, 1960). The pottery is readily identified, at least in its home territory, and the 27,041 sherds and pots that form the basis for the following description deserve a distinct classification and name.

Range:

The range of the corrugated pottery had shrunk before the plain ware was manufactured. Sites on southern Chupadero Mesa and in the Gallinas Mountains that were occupied during Glaze A times were abandoned. The positive range of Corona Plain was limited to the later sites in the upper Jornada, and those on the mesa between there and Gran Quivira, and east to Pueblo Colorado and Tabirá. The culinary wares of Abó and Quarai are somewhat different, but may be considered varieties of the type. The northern extent above them is unknown. There were no longer any sedentary people living south of Pueblo Pardo which is then the southern limit.

Dates:

The beginning of Corona Plain in the mid-1400’s has already been discussed. It continued unchanged until the abandonment of the district by Pueblo people in 1672.

Paste:

The plain ware paste is identical to that of the corrugated in color, but the sherds are generally a little thicker, averaging 6.4 mm. The pottery tends to be even more friable, and after it is washed, repeated handling continues to leave black, gritty dust on the hands. The edges of sherds become eroded so quickly that only about half of the complete jars we excavated were restorable, and many of those few would stand only long enough for measurement before collapsing.

It is possible that the loss of strength in the paste is due to a difference in temper, although the same material was used in the durable Tabirá Black-on-white. Actually, the same temper was used that we found in the corrugated sherds, but as Table 12 shows, there is a complete reversal in importance. The schist that was predominant in corrugated dropped to only 3 percent. Biotite felsite, which was relatively unimportant in the earlier pottery, was used in nearly three-quarters of the Corona Plain. The moderate use of quartz and feldspar remained about the same in both types. The data suggest some conclusions and raise questions that remain unanswered.

Table 12.
Temper used in Corona brown ware at Las Humanas.

<table>
<thead>
<tr>
<th>Temper</th>
<th>Corrugated</th>
<th>Plain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz mica schist</td>
<td>57%</td>
<td>9%</td>
</tr>
<tr>
<td>Quartz and feldspar</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>Biotite felsite</td>
<td>10%</td>
<td>74%</td>
</tr>
</tbody>
</table>

86. Corona Corrugated jar.
47. Corona Corrugated jar from a late Pueblo III house near headquarters.
Since neither schist nor granite are found locally, it seems likely that most of the cooking ware was imported to Las Humanas up until the mid-15th century, although the 10 percent tempered with felsite was probably made on the spot. After the introduction of the plain pottery, nearly all was tempered with rock available at the site. It was not possible to exercise tight enough stratigraphic control to determine whether the shift from imported corrugated to locally made plain ware occurred with the first use of plain culinary pottery in the 15th century, or whether the shift to plain ware was made in the imported pottery—the 23 percent of plain ware with foreign temper might represent this period. Most of the felsite-tempered plain sherds examined by Warren were from Late Phase sources, and none were from an unquestioned Middle Phase provenience. Future research will have to determine if the start of locally made cooking pots with felsite temper was contemporary with the A.D. 1550 introduction of Tabirá Black-on-white which used the same rock.

Surface treatment:
The exteriors of the Corona Plain pieces had all been wiped or scraped to remove traces of the coils. A few specimens appear to have been scraped and even show light polish, but most were only rubbed with the hand or some soft material and have a rough, uneven, gritty surface. In a few cases, the wiping was so casual that the division between separate coils shows through in places. The insides were even more likely to be polished and smudged than the corrugated—75 percent of 1,750 sherds. At least one jar was washed in a fugitive brick-red.

Shapes:
The total numbers of sherds of any shape other than jars amounted to less than one-tenth of one percent—which can only mean that with 27,000 sherds, almost anything can show up as a one-time whim. There were 10 bowl sherds—two of these, with rims typical of Glaze E bowls, were probably copies. Two soup plates and one pitcher were shapes identical to a common Tabirá Plain form. All other sherds and all of the restorable pots were jars.

Jars differed from the corrugated ware in being shorter, wider, and with higher, less-flared rims (fig. 88). With the exception of the smaller pots, they were nearly always wider than tall. Forty measureable vessels were from 10 to 39 cm. high and averaged 25 cm., and in width were 16 to 41 cm., averaging 30 cm.; the neck interiors were from 11 to 35 cm. and averaged 21 cm. The distribution through the range of sizes is quite even, with no discernible mode. Small, flat, unperforated lugs were seen on a handful of sherds, and two had small, vertical loop handles near the neck. Rims were untapered and usually flattened at the lip.

Three toylike miniature jars from 2.7 to 8.5 cm. high were carefully made replicas of the larger jars.

Comparisons:
The sequence of change in utility pottery from corrugated to rubbed-indented (or "smeared-indented" or "blind-corrugated") to plain is common to most of the Eastern Pueblo area. At the late end of the sequence at Pecos (Kidder, 1936), at Paako (Lambert, 1954), and in the Jemez sites (Reiter, 1938), it was common to striate the surface of plain jars with faint, horizontal brush marks. This technique never reached Gran Quivira. Shapes of jars, however, are very similar over the entire area, although at Pecos, Paako, and Abó (Toulouse, 1949), necks tend to be somewhat shorter, and rims flare at a greater angle. At both Pecos and Paako, the plain jar interiors were usually polished, but the smudging seems to be a southern trait confined to the Salinas pueblos.