PREHISTORIC CHRONOLOGY IN THE SABANA DE BOTOTA

Sylvia M. Broadbent
University of California, Riverside

The interpretation of archaeological finds in Chibcha territory (central Colombia) has long been hampered by one grave deficiency in present knowledge: no sequence of prehistoric cultures in this area has ever been established. In the older literature, the tendency has been simply to identify all material found there as "Chibcha", with no attempt to establish stylistic differences of possible chronological significance; the rare early suggestions that some materials might be older than others usually referred to items notoriously difficult to date in any event, such as pictographs and isolated stone monuments (Broadbent 1965a:6, 30). The best study published to date with the specific intent of establishing a cultural chronology (Haury and Cubillos 1953) distinguished between prehistoric, early historic (Colonial), and late historic (Republican) periods and cultural remains, but left prehistoric time and artifactual materials undivided. It is scarcely exaggerating to describe the present status of prehistoric chronology in the Chibcha area as roughly comparable to the situation in Peruvian archaeology before Max Uhle began his researches.

The habit of calling everything found in the area "Chibcha" fosters the assumption that it is all ascribable to its Conquest-period inhabitants, and leads to remarks on the order of "no pre-Chibcha culture has ever been found". Moreover, it has been suggested that Chibcha culture had a relatively short history, on the grounds that known sites are neither very deep nor very numerous (Haury and Cubillos 1953:93-94; Reichel-Dolmatoff 1965:161-162). Leaving aside the validity of this argument, which I regard as debatable, one is left with the implication that there is no evidence for human occupation of the area for more than

a few centuries before the Conquest, which seems highly unlikely in view of the propitious climate. The Sabana de Bogotá is climatologically noteworthy for average temperatures very close to the world-wide mean and remarkably little variation from it. According to a measure of temperateness which relates average temperatures and annual range to a thermal centrum of 14°C (57.2°F), Bogotá has the most temperate climate known (Bailey 1964; Axelrod 1966:149). Precipitation is ample but not excessive; the annual average of 37.4 inches, fairly well distributed through the year, gives an effective precipitation index of 9.0, slightly on the humid side of the boundary between Bailey's humid and subhumid moisture provinces (Bailey 1958, personal communication). The climate and the broad expanses of cultivable lands (as well as large numbers of exploitable Indians who had quite a lot of gold) were clearly factors that influenced the Spaniards to found and maintain an important administrative center there in spite of the arduous journey from the coast. It may further be remarked that the area is unusually free from natural dangers and discomforts, especially for a place so deep in the tropics. There are no poisonous snakes except in the lower-altitude margins, and few noxious insects, large carnivores, or serious endemic diseases; while earthquakes occur, they seldom do much damage, and other natural disaster conditions are virtually nonexistent. In sum, it is a very comfortable and safe place to live, and very beautiful as well. I find it hard to imagine that Indians would have neglected to occupy such an attractive area until the last few hundred years before the Spaniards arrived.

If prehistoric occupation of Chibcha territory can be expected to have covered a considerable time-span, cultural changes must have taken place, which ought to be reflected in typological differences in the archaeological material. In point of fact, what has been found there is quite variable, particularly the ceramic material, as was noted by Haury and Cubillos (1953:90). Although some of the variation may be a

matter of local differences, as Haury and Cubillos described it, some may well be due to a difference of age. In the present state of knowledge, it is difficult to decide whether differences between material from Facatativá and from Sogamoso are due to physical distance or to non-contemporaneity. Intensive studies of material from limited local areas might help solve the problems by eliminating the distance factor, but such studies have not usually been undertaken.

In the past two years, I have tried to remedy this situation by making a reasonably thorough search for sites in a limited area of the South of the Sabana de Bogotá, in the vicinity of the Laguna de la Herrera.* Although this survey is not yet as exhaustive as I would wish, since other commitments did not leave much time for it, it has resulted in the discovery of a group of sites which show promise of making it possible to establish a sequence of pottery types. Surface collections made at these sites show some very marked differences in the proportions of various distinguishable wares, in some cases between sites no more than half a kilometer apart. Since investigation of these sites has so far been limited to reconnaissance and surface collecting, their sequential order can only be suggested on the basis of a seriation of these collections. This method of chronological ordering has its limitations (Rowe 1961:327-328), and the results to be reported here should be regarded as strictly tentative and subject to testing by other methods as it becomes possible to do so. However, some of the frequency differences are so marked and the area within which they are found is so restricted that it is difficult to interpret them as anything but the result of a time difference. Differential weathering of the various types can hardly account for them, since the sites are subject to essentially the same conditions, and there are no looted cemeteries to confuse the issue with grave pottery broken by recent pothunters.

A total of twelve sites has been located, all but two of which lie on the southern side of the Laguna de la Herrera, a shallow, swampy

lake occupying the lowest portion of the Sabana. Very little exploration has as yet been done to the north of the lake, where the remaining two sites were found. All the sites are open ones; although rock shelters are present at at least two sites, they are not dry, and the major portion of the cultural deposit lies outside the shelters. The sites are located on natural terraces or benches, usually along the foot of the hills only a few meters above the level of the valley floor. A more detailed report on each of these sites is being prepared for publication elsewhere. My present purpose is to outline broadly the differences between the surface collections from them and to report my impressions of their probable sequence.

Pottery was by far the commonest type of artifact collected at these sites; percussion-flaked stone tools were also found at most of them, but not in sufficient quantity or typological variety to be useful for seriational purposes. The few ground-stone tools--two polished axe fragments, one mano, and one milling-stone fragment--are likewise of little help. It is on the pottery, therefore, that the suggested seriation is based. The most significant pottery types are Mosquera Crushed Rock, Mosquera Incised Red-slip, Guatavita Sherd Temper, and Tunjuelo Fine Quartz. Of these wares, only Guatavita Sherd Temper has been reasonably fully described in print as yet (Broadbent 1965b:99-100); its defining characteristics are crushed-sherd temper, fracture surfaces with numerous small angular facets, light paste color when oxidised, and certain types of form and decoration. Mosquera Crushed Rock is characterized by abundant white crushed rock temper which tends to disintegrate at the surface leaving cavities, usually grey to brown paste color, and rather broad-line incision as the commonest decoration. Mosquera Incised Red-slip has abundant fine sand temper comprising a variety of minerals, a gritty, granular brown paste, and deeply incised decoration done after the application of a moderately polished red slip. Tunjuelo Fine Quartz has scant to moderately abundant fine sand temper, mainly quartzitic; a

fine, compact texture when polished but a distinctive type of porosity when unpolished; and buff paste color when oxidized. More detailed descriptions of these wares will be published shortly. Other types have also been found, but in too small quantity to show differences of any real significance.

The relative proportions of these wares differs markedly between sites in this group, as will be seen in the accompanying table. At certain sites, notably MSQ-5, MAD-2, and MSQ-10, the Crushed Rock and Incised Red-slip wares are both present in considerable quantity, aggregating 50-75% of the pottery collected, while at other sites these wares represent only 5-8% of the collection. At the sites mentioned above, Tunjuelo Fine Quartz is present only in amounts of 1 or 2%, but at sites where Mosquera Crushed Rock and Incised Red-slip are rare, Fine Quartz accounts for from 15% to as much as 82% of the sherds collected. Sherd Temper was the most abundant ware found at three sites (MSQ-13, BOJ-5, and MAD-1), although it was overwhelmingly predominant at only the first of these. In general, this ware is relatively more abundant where the other three are found in low to moderate quantities.

The general picture seems to be that most of the sites fall into three general groups. One group yielded high proportions of Mosquera Crushed Rock and Incised Red-slip, very little Fine Quartz, and moderate amounts of Sherd Temper. A second group produced more Sherd Temper than any other type, with Crushed Rock and Incised Red-slip in moderate or low quantity--or even absent--while Fine Quartz was present in small to moderate amounts. The third group, consisting of sites MSQ-6, MSQ-4, and MSQ-8, had Fine Quartz as the most abundant ware, running up to an overwhelming majority in the last of these, while Crushed Rock and Incised Red-slip were rare and Sherd Temper was found in moderate to low quantity. It is suggested that these three groups of sites should be seriated in the above order, implying that Mosquera Crushed Rock and Incised Red-slip were popular at a time when Fine Quartz was unknown or rare; that as these

wares declined in popularity, Sherd Temper became more common, to be later eclipsed by the rise in frequency of Fine Quartz ware, which eventually became almost the only ware used. Evidence for the direction of this sequence will be presented shortly. Mention should be made of three sites (MSQ-12, MSQ-3, and MSQ-9) in which the most abundant ware is not one of those mentioned above; two of them are represented only by very small collections. They are tentatively placed between the first and second groups. Further discussion of this and other problems will be presented below.

The direction of the sequence I have proposed is determined by various considerations which lead me to believe that Tunjuelo Fine Quartz is a relatively late ware and that Mosquera Crushed Rock and Incised Red-slip are older. Tunjuelo Fine Quartz is virtually the same as the ware found at Facatativá that Haury and Cubillos (1953:28-29) called Type E; having examined some of their collections at the Instituto Columbiano de Antropología (Bogotá) and compared them with my own, I found that I would classify as Fine Quartz most of the sherds they illustrate for Type E, and others in bags labelled Type E. However, it should be noted that I would also so classify many of the sherds similarly identified as Type D, especially those from sites in the rural district of Pueblo Viejo; I believe that Haury and Cubillos' Types D and E of Facatativá should be reconsidered in the light of other material now available. It should be remembered that theirs was the first serious attempt to establish any sort of ceramic typology in Chibcha territory, and that they were dealing with materials unlike those previously reported. At all events, practically all the pottery they found at the Pueblo Viejo sites was Types D and E, especially the latter, and very similar indeed to the Fine Quartz ware found at the Laguna de la Herrera. It is very tempting to compare the 82% of Type E found at Pueblo Viejo nos. 1 and 2 with the 82% Fine Quartz found at MSQ-8, but such an exact coincidence of proportions is probably accidental. According to local tradition, Pueblo Viejo is where

the Indian town of Facatativá was located (Haury and Cubillos 1953:51), as its name suggests; hints of a church there may mean that the settlement lasted into the early Colonial period. This would indicate that the predominant Fine Quartz ware found there would date from the time of the Conquest and shortly thereafter. Haury and Cubillos (1953:68-69) were of the opinion that Type E dated from the Conquest or before and that Type D was of Colonial date.

Further evidence for a Conquest-period date for Fine Quartz ware is the fact that it is one of the commonest wares at a site near Funza documented as part of Chibcha Bogotá and therefore presumably occupied in 1537, although it was in Spanish hands soon after (Broadbent 1966). It is also common in surface collections at a large, well-known site in Soacha (Reichel Dolmatoff 1943), where the soft, dusty character of at least the upper levels of the deposit suggest a relatively late date, although the material found there is clearly aboriginal. Tunjuelo Fine Quartz ware thus appears to be associated with sites of probable or established Conquest-period occupation, at least in the south of the Sabana. This ware has been found in surface collections from other parts of Chibcha territory, including locations as far away as Guatavita, Tunja, and even Sogamoso--again, in sites probably occupied at the time of the Conquest--but so far it has been found in overwhelming predominance only at sites in Facatativá and the Laguna de la Herrera. Future finds may change the picture considerably, but at present it would appear that this ware reached a peak of popularity in the South of the Sabana that was not equalled elsewhere.

If Fine Quartz ware, and the sites containing it in abundance, date from around the time of the Conquest, it appears very unlikely that it can mark the early end of the seriation, because then the sites at the other end would have to be of Colonial date, which can be refuted on several grounds. These sites do not produce any noteworthy abundance of glazed or other obviously recent wares; some recent sherds are found at

practically all sites, but are easily accounted for by the presence of nearby modern peasant houses and trails. Secondly, it seems highly unlikely, in view of the well-known policy of reducciones, that the Spanish authorities would have tolerated the existence of three or four good-sized Indian settlements in this area late into the Colonial period. Further, the character of the deposits at these sites suggests a dating earlier than those where Fine Quartz is abundant; they are much harder and more compact, and look more leached-out, as if they had been exposed longer to the effects of natural forces. At one site (MSQ-10), the artifact-bearing stratum is at least partly overlain by a sterile layer of lighter-colored earth some 30 cm. thick. The only apparent source for this material is a relatively gentle slope above the site, without much obvious erosion, which does not suggest that this layer could have been deposited in a very short span of time. A Colonial-period dating for the cultural stratum underneath the sterile layer appears very improbable. Yet another suggestion of dating substantially before 1537 lies in the fact that burned human bone has been found at sites MAD-2 and MSQ-10. Cremation is never mentioned historically as a Conquest-period Chibcha burial practice, although it would surely have attracted Spanish attention and would not have been tolerated for long in the Colonial period. All indications, therefore, are that the sites where Mosquera Crushed Rock and Incised Red-slip are abundant are earlier than those with much Fine Quartz ware, and in fact that they may date fairly well back in prehistoric time.

The sites with relatively high percentages of Guatavita Sherd Temper ware have been seriated between the two extremes, on the assumption that their low to moderate proportions of the other three significant wares indicate a point where Mosquera Crushed Rock and Incised Red-slip were losing popularity, but Fine Quartz had not yet attained its full predominance. As has been noted elsewhere (Broadbent 1962:345; 1965b:104), this ware is what the vessel forms long regarded as "Classic Chibcha"--

footed cups, tall-necked bottles, and anthropomorphic vessels with shield-shaped faces--are usually made of. Such vessels have been found in graves in virtually all parts of Chibcha territory. However, in sherd collections, whether surface or excavated, this ware is not as abundant as the museum displays of fine complete specimens would lead one to expect. It seems to be only in the region of Guatavita, Gachancipá, Tocancipá and Sopó that it was common enough in daily use to predominate among the pottery that got borken and scattered around habitation areas. I have surface-collected sherds of this ware in considerable numbers at sites in the above-mentioned municipios, and it is to be noted that Haury and Cubillos' "Tipo D (variante de Gachancipá)" (1953:73-75) has sherd temper. Having examined some of their sherds, I am convinced that its paste characteristics fall within the range of Guatavita Sherd Temper ware, although the vessel forms are not the "Classic Chibcha" ones. It is not very clear what types of pottery were found by Haury and Cubillos on the terraces between Tocancipá and Sopó, but I have found plenty of Sherd Temper there. Elsewhere, this ware is much less common. It is by no means rare at the Funza site, but Tunjuelo Fine Quartz is really more abundant there. Very little Sherd Temper has been found at Facatativá, although it did occur at the sites in the Parque Arqueológico Nacional: it is Haury and Cubillos' types F-G-H-I (1953:30). Examination of their illustrated sherds showed that the "mineral blando rojo predominante" referred to in their description is ground sherd. Sherd Temper was found at Tunjuelito (Broadbent 1962), and in collections from sites in Soacha, Chocontá, Tunja, and Sogamoso, but not as abundantly as in the area of the range of hills between Sopó and Guatavita. It thus seems likely that at the time of the Conquest, this ware was in common daily use only in the latter area, although it was known and used at least for ceremonial purposes far and wide in Chibcha territory. This finding might lend some credence to certain historical statements to the effect that Guatavita was a more important center than Bogotá until shortly

before the Spaniards arrived. It may also be worth noting that the only modern sherd-tempered ware I have seen in Chibcha territory is made by the few remaining potters in Nemocón, which is in the same general area. The ware from Ráquira, which supplies most of the modern hand-made pottery, has sand temper and seems most like certain sand-tempered, red-on-buff painted wares which have not been discussed here because they are rare in the Laguna de la Herrera collections.

One of the Laguna de la Herrera sites, MSQ-13, shows an unusually high proportion of Guatavita Sherd Temper. I am not certain how to interpret this site at present. The available collection is small, but the predominance of Sherd Temper seems too great to be accidental. The site now presents little sign of having been a substantial settlement, although erosion may have removed part of it. Its location is somewhat unusual, being higher and more nearly enclosed by hills than the other sites. Perhaps it was a ceremonial center rather than a village; this interpretation would accord with the hypothesis that Sherd Temper was a primarily ceremonial ware outside the Guatavita-Sopó area. Another problematical site is MSQ-12, from which a substantial collection is available. The commonest ware there was one which has not been discussed so far, namely Mosquera Porous. It is an extremely soft, fragile ware, with a non-crystalline, yellowish temper material which itself seems porous and is subject to erosion; it may be burned bone. So far, little is known about this ware. It was not until MSQ-12 was located that enough material was available to prepare a type description, although the dozen or so sherds of it found at Funza strongly suggested a distinctive type. Haury and Cubillos (1953:40) found a few sherds of it at Facatativá no. 1, in the Parque Arqueológico. They regarded it as a variant of Type E, but it seems to me very different from Tunjuelo Fine Quartz.

It is very likely that other pottery types, as yet not fully identified, are present in these collections and that when excavations are conducted or more substantial surface collections are analyzed it

will prove possible to define them. Most of the sherds listed in the table as "unclassified" because they did not clearly fit into any established types probably constitute one or two such unidentified types, not present in sufficient numbers to define in the analyzed collections. It is noteworthy that the percentage of unclassified sherds tends to be highest in the sites believed to be earliest in date.

In sum, it should be clear that the prehistoric pottery of Chibcha territory is by no means restricted to the limited variety well-known from grave finds. I do not know of any complete specimens of several of the wares discussed here. It should also be clear that the material found by Haury and Cubillos at Facatativá and elsewhere is no longer so isolated and unlike anything else known from the area as it seemed when it was first published, largely because there was then little to compare it with but grave material. It can now be related to a whole group of sites in the Laguna de la Herrera region, and also to sites at Funza, Soacha, and elsewhere. With further investigation at some of these sites, I believe it will soon be possible to establish securely a coherent ceramic chronology going back at a minimum several hundred years before the Spanish conquest, at least for the southern portion of the Sabana. Type-frequency seriation of surface collections from the Laguna de la Herrera sites suggests that between them they represent a human occupation over a considerable period of time. I believe that at any one point in time no more than two or three of them would have been occupied simultaneously, and that the settlement pattern was always one of a few more or less nucleated settlements nestled at the foot of the hills around the shores of the lake, perhaps with some isolated houses dotted about in the areas between villages as is characteristic of the modern peasant settlement pattern. If the location of the major villages changed from time to time, and the relative popularity of different types of pottery changed gradually, the pots used and broken at villages of different date would produce assemblages of variable proportions of pottery

types such as have been found. To account for a difference such as that between MSQ-5 and MSQ-8, which are only about half a kilometer apart, I believe that a time interval of at least several hundred years, perhaps as much as a thousand, must have intervened between the latest times that substantial groups of people lived on them. Whether or not the earlier cultures were directly ancestral to that of the historic Chibcha is a matter for further investigation, but it appears that people of some kind did indeed live there long before the Spaniards arrived.

NOTE

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	Mosquera Crushed Rock		Mosquera Incised Red-slip		Funza Abundant Quartz		Mica Temper*		Mosquera Porous		Guatavita Sherd Temper		Tunjuelo Fine Quartz		Hard fine grey**		Guatavita Grey-Tempered Red		Tunjuelo Fine Sandy Painted		Funza Hard Laminar		Tunjuelo Laminar		Unclassified		Total
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#
MSQ-5	61	36	28	16	8	5	--	--	4	2	20	12	3	2	--	--	--	--	--	--	--	--	--	--	47	28	171
MAD-2	50	28	76	43	2	1	--	--	3	2	17	10	2	1	--	--	--	--	--	--	--	--	--	--	26	15	176
MSQ-10	105	26	189	46	6	2	--	--	6	2	51	12	4	1	--	--	--	--	4	1	--	--	--	--	45	11	410
MSQ-12	34	9	52	14	43	12	15	4	105	28	54	15	13	4	--	--	7	2	1	.3	--	--	--	--	46	12	370
MSQ-3	--	--	3	23	4	31	--	--	--	--	3	23	--	--	--	--	1	8	--	--	--	--	--	--	2	15	13
MSQ-9	--	--	--	--	6	86	--	--	1	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7
MSQ-13	--	--	--	--	1	3	--	--	--	--	23	72	1	3	--	--	3	9	3	9	--	--	--	--	1	3	32
BOJ-5	1	1	12	17	4	6	8	12	5	7	19	28	15	22	--	--	4	6	1	1	--	--	--	--	--	--	69
MAD-1	--	--	1	5	3	16	--	--	3	16	5	26	3	16	--	--	1	5	3	16	--	--	--	--	--	--	19
MSQ-6	5	6	--	--	12	14	--	--	15	17	14	16	23	27	--	--	--	--	2	2	--	--	--	--	15	17	86
MSQ-4	--	--	3	8	1	3	5	13	3	8	6	15	16	41	--	--	--	--	1	3	--	--	3	8	1	3	39
MSQ-8	--	--	16	6	4	1	--	--	4	1	7	3	231	82	13	5	--	--	6	2	1	.4	--	--	--	--	282

* Not adequately defined; perhaps related to Mosquera Incised Red-slip.

** Not adequately defined; probably a variant of Tunjuelo Fine Quartz.

TABLE. DISTRIBUTION OF POTTERY TYPES, LAGUNA DE LA HERRERA SITES.

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