MAN

A MONTHLY RECORD OF ANTHROPOLOGICAL SCIENCE

PUBLISHED UNDER THE DIRECTION OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND

Vol. XLVII, 103–112 JULY, 1947

ORIGINAL ARTICLES

PREHISTORY OF TRINIDAD IN RELATION TO ADJACENT AREAS. *By Irving Rouse, Assistant Professor and Assistant Curator of Anthropology, Department of Anthropology, Yale University. With Plate G and illustrations in text*

103 Of the three major groups of Indians who inhabited the West Indies upon the discovery of America—the Ciboney, the Carib, and the Arawak—the last were the most widespread. Columbus encountered them in Trinidad off the north-eastern coast of South America, and in the Greater Antilles not far from Florida. There is evidence that they had also occupied the intervening Lesser Antilles before the more warlike Carib seized those islands (Lovén, 1935).

That the Arawak migrated from north-eastern South America is a generally accepted hypothesis, supported both by the nature of their culture, which is South American in type, and by their resemblances in language to certain tribes of the Guianas (Gower, 1927 ; de Goeje, 1939). It has been suggested that they took advantage of the South Equatorial Current, which flows past the Guianas to Trinidad, or of the Orinoco River, whose waters also reach Trinidad, to move out into the Antilles by way of the latter island (Fewkes, 1914*b*).

Some archæological data have accumulated concerning the supposed precursors of the Arawak in north-eastern South America, largely as the result of recent work under the Caribbean Anthropological Program of Yale University (Osgood, 1946). Other research in connexion with this programme has led to a reconstruction of the prehistory of the Arawak after their arrival in the Greater Antilles (Rouse, 1947). We have not, however, had comparable knowledge of the Arawak movements in the intervening area.

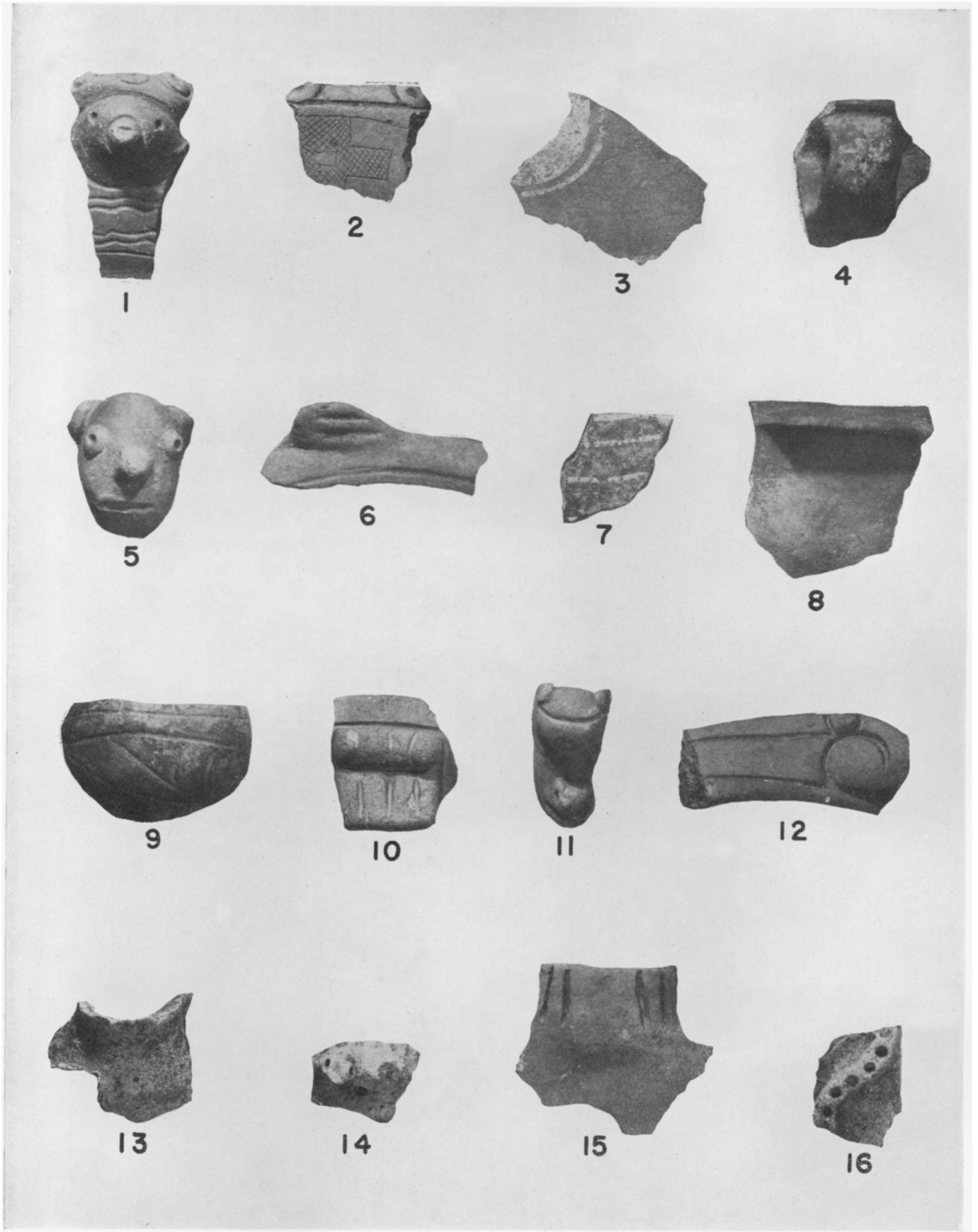
In an attempt to fill this gap, Mr. J. A. Bullbrook and the writer undertook excavations in Trinidad last summer (1946) under the joint auspices of Yale University and the Historical Society of Trinidad and Tobago.[1] The present article is intended to provide a preliminary account of this work, and to discuss its significance for the hypothesis that the Arawak migrated into the Antilles by way of Trinidad.

The specific objective of the work was to set up a sequence of ceramic styles with which to correlate sequences previously established under the Yale programme in Puerto Rico and the Orinoco Valley. A preliminary study of the collections of the Historical Society of Trinidad and Tobago revealed the existence of three ceramic styles, each of which was given the name of a typical site : Bontour, Erin, and Palo Seco. The presence of a fourth style, Cedros, was postulated on the basis of the previous research in Puerto Rico and was subsequently verified as the result of work in the field (fig. 1, bottom).

The exigencies of transportation made it necessary to limit the field work to the south-western corner of Trinidad, where ten stratigraphic trenches were dug in the refuse of five sites (fig. 1, top). These confirmed the existence of the four styles and provided the basis for defining them in greater detail. In addition, the excavations have made it possible tentatively to distinguish six periods in the occupation of south-western Trinidad by the Indians, during each of which one of the styles was predominant (fig. 1). These results may be summarized as follows.

Cedros style.—The potsherds obtained at the Cedros site and those from Trench 2 at Palo Seco differ in style from any previously reported from Trinidad. They are, however, not unlike material obtained by J. P. B. de Josselin de Jong (n.d.) on the island of St. Eustacius in the Lesser Antilles. These sherds are

[1] The work also was sponsored officially by the Colonial Government, and for this we wish to express our appreciation to His Excellency Capt. the Hon. Sir Bede Clifford, G.C.M.G., C.B., M.V.O., Governor of Trinidad and Tobago, who was kind enough to take a personal interest in its progress. It is impossible to mention here the many other people to whom we are indebted for information or assistance, but we must acknowledge the co-operation of the Trinidad Petroleum Development Co., Ltd., in providing transportation, without which little could have been accomplished. Our expenses were defrayed by a grant from the Viking Fund of New York.



POTSHERDS FROM SOUTH-WESTERN TRINIDAD

1–4, CEDROS STYLE: 5–8, PALO SECO STYLE: 9–12, ERIN STYLE: 13–16, BONTOUR STYLE

thin, fine, and hard. Although mainly from bowls, they often have a sinuous profile, combining a convex body section with a concave, outflaring shoulder (Plate G, 1). They lack flanges, *i.e.* extensions of the vessel wall at an angle to the rim. Decoration, which in the other styles occurs primarily on the flange, is here concentrated on the inner or outer surfaces of the vessel shoulders. Finely cross-hatched incised designs are particularly diagnostic and are limited to the pottery of this style (Plate G, 2). On some Seco in style. These appeared in larger numbers in Trench 2 at Palo Seco, where they increased in proportion from the bottom to the top levels, suggesting that the Palo Seco deposit is somewhat later than the Cedros. For this reason, in fig. 1 we have placed the two in separate periods, numbered 1 and 2.

Palo Seco style.—The lower levels of Trenches 1 at Erin Bay and 1 and 2 at Quinam, as well as all of Trenches 2 at Erin Bay, 1 at Palo Seco, and 3 at Quinam, yielded pottery of a single style, here called

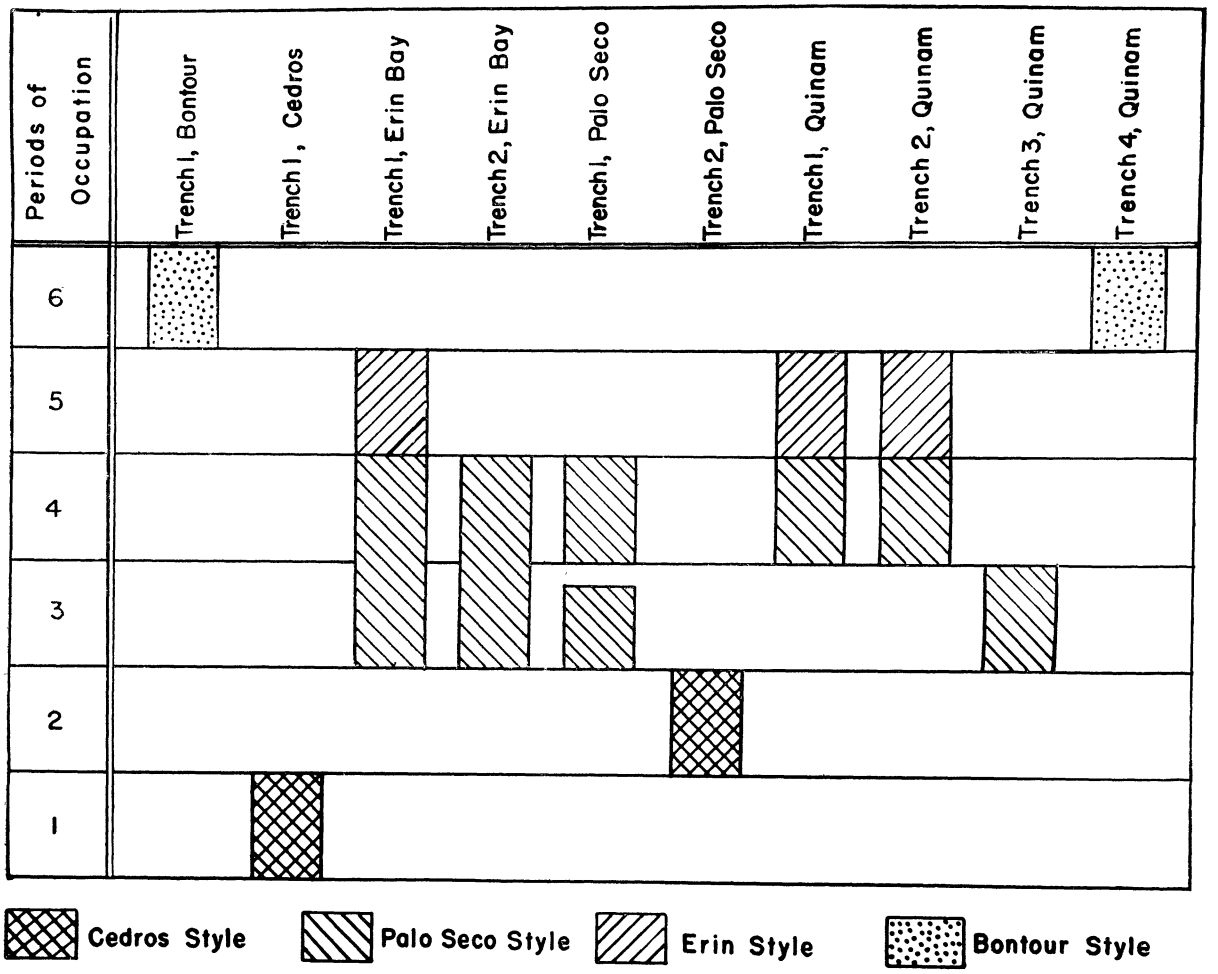


FIG. 1.—TENTATIVE CHRONOLOGICAL ARRANGEMENT OF THE TRENCHES IN TERMS OF THEIR PREDOMINATING STYLES

sherds, areas and designs are painted in from one to three colours, of which red and white are the most common (Plate G, 3). There are also simple geometric lugs, often decorated with modelled-incised figures, such as circles enclosing dots ; and zoomorphic head lugs, typically concave at the back (Plate G, 2, 1). Some lugs are situated on rims and others on vertical, D-shaped strap handles (Plate G, 1, 4).

The pottery obtained at the Cedros site is considered to be a relatively pure sample of the style. It includes only a few intrusive sherds, all of which are Palo Seco in recognition of the previous excavation of pottery of this style by Bullbrook (1920) at the Palo Seco site. Such pottery seems to be the most abundant in Trinidad, having also been collected by Theodoor de Booy (1917) at Mayaro on the east coast and by Major J. E. L. Carter and others at a number of south coast sites (Bullbrook, 1940).

The potsherds of the Palo Seco style are moderately thick, coarse, and soft, the lugs sometimes disintegrating upon excavation like mud. The sherds lack the sinuous profiles of Cedros pottery ; they are

characterized instead by broad, thin flanges, concavo-convex in cross-section and often decorated with monochrome painting or broad incised lines (Plate G, 8, 6). There is some polychrome painting on the outer surfaces of the vessels (Plate G, 7), but none of the finely incised cross-hatching of the Cedros sherds. Geometric lugs bearing simple modelled-incised figures are still present, with horizontal lines a common motif (Plate G, 6). Zoomorphic lugs are not so conventionalized; few of them have concave backs or occur upon D-shaped handles (Plate G, 5).

Bullbrook (1920) had previously distinguished two strata at the Palo Seco site, and this distinction was duplicated by our Trench 1, dug alongside his excavation. The majority of the sherds obtained from both strata were Palo Seco in style. In addition, we found a few specimens of the Cedros style in the lower stratum and of the Erin style in the upper stratum, thereby establishing the sequence of Cedros—Palo-Seco—Erin styles. This sequence was confirmed in Trench 1 at Erin Bay, where a few Cedros sherds occurred at the very bottom of a deposit characterized by the Palo Seco style and the latter in turn lay beneath levels in which sherds of the Erin style predominated. Upon the basis of these differences, we have divided the deposits of Palo Seco material into two groups, an earlier one marked by the presence of a few Cedros sherds, and a later one in which Erin sherds are in the minority (Periods 3 and 4 of fig. 1).

Erin style.—Sherds of the Erin style predominated only in the top levels of Trench 1 at Erin Bay and of Trenches 1 and 2 at Quinam. Although we did not find them alone in any of these places, they are known to occur by themselves in a section of the Erin Bay site previously investigated by Bullbrook and by J. Walter Fewkes (1914*a*). For this reason, the style has been given the name of the latter site.

The sherds of the Erin style are the thickest encountered in Trinidad. Although smooth on the surface, they have a coarse, gritty interior consistency. Bowls are still the outstanding form; they tend to have straight, outsloping sides and thick flanges, triangular in cross section (Plate G, 12). Polychrome painting gives way entirely to monochrome, and the latter is rarely found (Plate G, 9). Incised and modelled-incised designs are commoner, more complex, and more sophisticated; the latter now occur on flanges and vessel walls as well as on lugs. The spiral and paw-like motif are characteristic (Plate G, 12, 10). Both lugs and vertical strap handles are still present. Zoomorphic head lugs are particularly elaborate and stylized; it would seem that incision

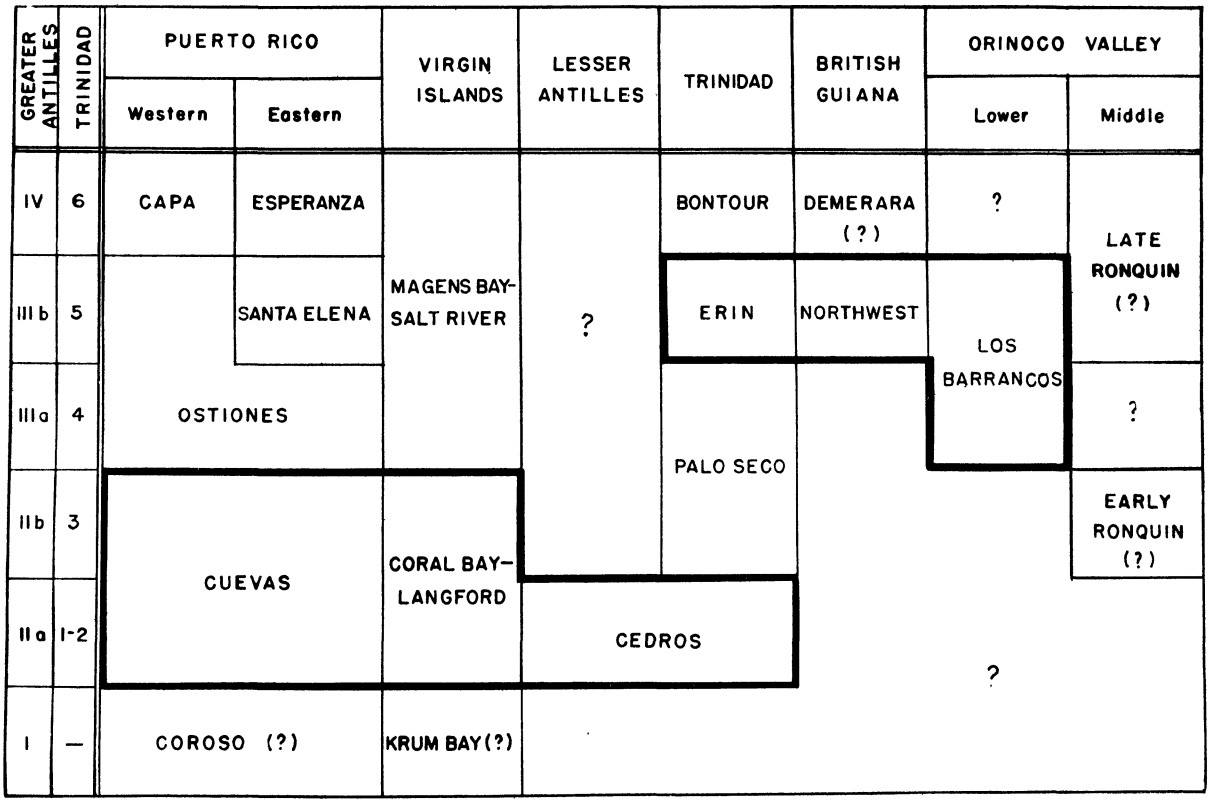


FIG. 2.—PRELIMINARY CORRELATION OF THE PERIODS AND STYLES

and modelling were more expertly used to delineate their features than previously (Plate G, 11).

No chronological distinctions can be made among the deposits characterized by the Erin style, because they are relatively homogeneous. All contain a minority of Bontour and Palo Seco sherds in roughly the same proportions; hence, on fig. 1 all have been assigned to the same period (no. 5).

Bontour style.—In our preliminary survey of the collections of the Historical Society of Trinidad and Tobago, we were impressed by the relative crudity and drabness of the pottery previously excavated at the site of Bontour by Major Carter and Mr. K. W. Barr. Accordingly, we dug a trench at that site, also finding pottery of the same style in Trench 4 at Quinam. The sherds obtained are thin, soft, and often pock-marked, apparently as a result of the leaching-out of particles of shell used as tempering material (Plate G, 13). The olla, rather than the bowl, seems to be the common shape, most of the sherds coming from either the shoulder or the neck of the vessel (Plate G, 13). Flanges, as a result, are rare, and so also is decoration, largely limited to the rims of bowls (Plate G, 15). Painting and modelling are virtually non-existent, save for a few tiny head lugs with pinched features (Plate G, 14). Geometric lugs and vertical strap handles are more common, but the latter lack the decoration characteristic of the previous styles. Crude appliqué work makes its appearance for the first time (Plate G, 16). Incision and particularly punctation are also diagnostic; the designs consist mainly of straight, parallel lines or of dotted areas (Plate G, 14, 15).

In some respects the Bontour pottery recalls the Palo Seco. This, combined with the presence of a few Bontour specimens throughout the deposits containing Erin sherds, suggests that the Bontour style may have developed out of the Palo Seco, existing as a minority ware during the Erin period (no. 5 in fig. 1) and becoming predominant at a later time (Period 6 in fig. 1). Or it is possible that the Bontour style developed elsewhere during the Erin period (5), appearing in south-western Trinidad only as a trade ware at that time, but subsequently (in Period 6) being adopted by the local Indians in place of the Erin style. A few Erin sherds, but no examples of the Cedros and Palo Seco styles, were found both at Bontour and in Trench 4 at Quinam, a distribution which would fit either hypothesis.

The six periods mentioned incidentally above may be reconstructed as follows. Period 1 was characterized by the Cedros style of pottery, with the Palo Seco style just coming into existence. During Period 2, the Palo Seco pottery increased in frequency, but the Cedros pottery remained predominant. These proportions were reversed during Period 3, the Palo Seco style becoming the more popular. By Period 4, the original Cedros style was extinct, its place as the ware secondary to Palo Seco being taken by the Erin pottery. The latter reached its peak during Period 5, at which time the Palo Seco ceramics barely survived and the Bontour style first made its appearance, either as a minority or a trade ware. In the sixth and final period, the Bontour style became predominant, with Erin the only other style remaining (fig. 1).

Previous work in the Greater Antilles has resulted in the establishment of six periods of Indian occupation there (Rouse, 1947). Period I, the first, is pre-ceramic and, since no counterpart has as yet been found in Trinidad, may be ignored here. The subsequent periods, II*a*, II*b*, III*a*, III*b*, and IV, are distinguished, as in Trinidad, by various styles of pottery, of which those in Puerto Rico and the Virgin Islands, closest to Trinidad, are shown in fig. 2.

Our work last summer provided the means of correlating the Greater Antillean and Trinidadian sequences. Period II*a* in the Greater Antilles is almost certainly the equivalent of Periods 1 and 2 in Trinidad, for two reasons: (1) the Cuevas pottery of Puerto Rico and the Coral Bay—Langford of the Virgin Islands resemble closely the Cedros pottery of Trinidad, and (2) a few sherds of the Cedros style occur in both the Cuevas and Coral Bay—Langford sites, either as a minority or as a trade ware. Period II*b* is presumably later, since it has not yielded Cedros pottery; therefore, it is correlated with Period 3 in Trinidad (fig. 2).

Period III*a* in the Greater Antilles can be equated with Period 4 in Trinidad, for we obtained a number of sherds of the Ostiones style, diagnostic of the former period, in the sites of the latter, apparently carried there as the result of trade. That Period III*b* in the Greater Antilles similarly correlates with Period 5 in Trinidad is indicated by the presence of 'trade sherds' of both the Ostiones and Santa Elena styles in the deposits of the latter period. This leaves Period IV in the Greater Antilles to be contemporaneous with Period 6 in Trinidad, a correlation which is confirmed by our finding of a possibly Capá sherd from Puerto Rico at the Bontour site (fig. 2).

Archæological research in north-eastern South America has not progressed far enough to permit the establishment of a comparable sequence of periods on the mainland. One correlation, however, was revealed by our work of the past summer. The pottery of Los Barrancos on the lower Orinoco River in Venezuela (Osgood and Howard, 1943, pp. 98–111), as well as the similar material from the North-west District of British Guiana (Osgood, 1946, pp. 44–50), may be attributed to the same late period as the Erin pottery of Trinidad (fig. 2). Not only are the three very

similar in style, but also we found several 'trade sherds,' presumably from Los Barrancos or a related site on the Orinoco, among the Erin deposits.

The relation of the rest of the Trinidadian sequence to the pottery of north-eastern South America is not clear. Nothing like the Cedros style has, to the writer's knowledge, yet been found on the mainland. Certain vague similarities between the early Palo Seco pottery and the Early Ronquin ceramics of the middle Orinoco (Howard, 1943) suggest that the two may possibly be contemporaneous (fig. 2). At the top of a late Palo Seco deposit in Trinidad, we obtained one ' trade sherd ' which resembles Late Ronquin pottery (*cf.* Howard, 1943), but we cannot be sure whether this signifies the beginning or the end of the Late Ronquin period. Another and even more tentative correlation is suggested by the high frequency of punctation on both the Bontour potsherds and those from Demerara in British Guiana (Osgood, 1946, pp. 50–56).

As fig. 2 will indicate, the above correlations provide only a spotty and, so far as the mainland is concerned, unreliable picture of the distribution of the ceramic styles. Two fairly well documented regularities in style do emerge from the picture, however, and are outlined in black in the table : (1) The Los Barrancos pottery of the lower Orinoco, the comparable material from the North-west District of British Guiana, and the Erin pottery of Trinidad resemble each other ; and (2) the Cedros style of Trinidad and the Lesser Antilles, the Coral Bay—Langford pottery of the Virgin Islands, and the Cuevas style of Puerto Rico are likewise similar. In each case, the styles grouped together seem to have existed on the same relative time level, and therefore to have constituted a distinct ceramic horizon. The groups will be termed respectively the Los Barrancos and Cuevas horizons.

If the two horizons are combined, they blanket the area over which the Arawak are presumed to have migrated into the West Indies (fig. 2). This raises the question whether the two may have any bearing upon the hypothesis of Arawak migration.

In 1942, before the relative temporal position of the horizons had been established, Cornelius Osgood identified both as Arawak. He further suggested tentatively that the Los Barrancos horizon was ancestral to that which is here called Cuevas (Osgood, 1942, p. 3). Finally, in 1946 he expressed the opinion that the Los Barrancos—Cuevas development was to be correlated with the initial Arawak movement out into the Antilles (Osgood, 1946, pp. 59 f.).

In the light of the data obtained last summer, these conclusions are no longer tenable. It now appears that the two horizons, instead of developing one from the other, were separated by a gap in time and a difference of style (fig. 2). It is clear, too, that the Cuevas horizon was earlier than the Los Barrancos, contrary to the theory of migration.

Of the two horizons, only the Cuevas still has the possibility of correlation with the initial Arawak migration. In both Puerto Rico and the Virgin Islands this horizon seems to mark the first appearance of the Arawak, as well as of pottery (Rouse, n.d. ; Hatt, 1924), and the same may be true of Trinidad. To be sure, pottery representing the Cuevas horizon has not yet appeared on the mainland, but we cannot assume that it is absent until more is known about the archæology of north-eastern South America. As a working hypothesis, we suggest that the traits characteristic of the Cuevas horizon did originate on the mainland—whether in the Orinoco Valley or in the Guianas we do not venture to predict—and that they were brought into the West Indies by the first Arawak settlers.

It is probable that the Los Barrancos horizon also originated on the mainland, spreading from there to Trinidad, for that horizon seems to be the earliest along the lower Orinoco, while in Trinidad, as noted above, it may be intrusive into a Palo Seco—Bontour tradition of ceramics (fig. 2). The part which the Arawak played in the development of this horizon is uncertain. With the breaking of the Cuevas—Los Barrancos connexion, we can no longer definitely identify as Arawak any known archæological material in Venezuela or the Guianas. It may have been the Arawak who originated the traits of the Los Barrancos horizon, or it may have been some other group, such as the Carib.

In seeking to explain the spread of the Los Barrancos horizon to Trinidad, we are faced with two alternative hypotheses : (1) the spread may have been the result of a second migration, following the original Arawak movement ; or (2) it may have been brought about by trading or other contacts short of mass migration, such as the Warrau Indians of the Orinoco delta maintained with modern Trinidad until very recently (Fewkes, 1922, p. 64). We are not at present in a position to choose between these alternatives.

It is clear that further research must be undertaken on the mainland if we are to solve the problems of Arawak migration. Only extensive excavations may be expected to reveal whether the Arawak underwent one or two successive migrations, whether they came first from the Orinoco region or from the Guianas, and what was the nature of their ancestral mainland culture.

References

Bullbrook, J. A., 1940, ' The Ierian Race,' *Public Lectures delivered under the auspices of the Historical Society of Trinidad and Tobago during the session* 1938–9 (Port of Spain), pp. 1–46.

Bullbrook, J. A., 1920, 'On the Excavation of a Shell Mound at Palo Seco, Trinidad, B.W.I.' (MS. in the British Museum and at Yale University).
Fewkes, J. Walter, 1914*a*, 'Prehistoric Objects from a Shell Heap at Erin Bay, Trinidad,' *Amer. Anthrop.* (Menasha), n.s., XVI, pp. 200–220.
Fewkes, J. Walter, 1914*b*, 'Relations of Aboriginal Culture and Environment in the Lesser Antilles,' *Bull. Amer. Geog. Soc.* (New York), XLVI, pp. 662–78.
Fewkes, J. Walter, 1922, 'A Prehistoric Island Culture Area of America,' *Ann. Rep. Bur. Amer. Ethn.* (Washington), XXXIV.
Goeje, C. H. de, 1939, 'Nouvel examen des langues des Antilles,' *Journal de la Société des Américanistes* (Paris), n.s., XXXI.
Gower, Charlotte, 1927, 'The Northern and Southern Affiliations of Antillean Culture,' *Mem. Amer. Anthrop. Assoc.* (Menasha), XXXV.
Hatt, Gudmund, 1924, 'Archæology of the Virgin Islands,' *Proc. XXI Internat. Cong. Americanists* (The Hague), I, pp. 29–42.
Howard, George D., 1943, 'Excavations at Ronquin, Venezuela, *Yale Univ. Publ. in Anthropology* (New Haven), XXVIII.
Josselin de Jong, J. P. B. de, n.d., 'Report on the Archæology of Saba and St. Eustacius' (MS. in the Rijksmuseum voor Oueden, Leiden).
Lovén, Sven, 1935, *Origins of the Tainan Culture, West Indies* (Göteborg).
Osgood, Cornelius, 1942, 'Prehistoric Contact between South America and the West Indies,' *Proc. Nat. Acad. Sci.* (New York), XXVIII, pp. 1–4.
Osgood, Cornelius, 1946, 'British Guiana Archeology to 1945, *Yale Univ. Publ. in Anthropology* (New Haven), XXXVI.
Osgood, Cornelius, and George D. Howard, 1943, 'An Archeological Survey of Venezuela,' *Yale Univ. Publ. in Anthropology* (New Haven), XXVII.
Rouse, Irving, 1947, 'The West Indies,' *Handbook of South American Indians : Bur. Amer. Ethn.* (Washington), Bull. 143, Vol. 4.
Rouse, Irving, n.d., 'Space and Time Perspective in Puerto Rican Archeology' (MS. at Yale University, New Haven).

THE STUDY AND PRESERVATION OF THE ANCIENT LAPP CULTURE: SWEDEN'S CONTRIBUTION SINCE 1939. *By Ernst Manker, Keeper of the Lapp Department, Nordiska Museet, Stockholm, and Honorary Fellow of the Royal Anthropological Institute*

104 Although Sweden was not a belligerent in the late war, the state of preparedness which she maintained throughout profoundly affected her national life and in particular interrupted or slowed down the development of the sciences not important for war (see MAN, 1946, 100).

Naturally, our ethnologists could not send any field expeditions outside Sweden's frontiers, but Swedish researchers had at least an opportunity to study and solve their own problems in undisturbed quiet; and during those years the investigation of Lapp culture was more intensive than ever before.

Just before the outbreak of war a keepership had been created in the Lapp Department of the Nordic Museum and I had the privilege of being given charge of it. Besides a great many tasks concerned with technical matters, publicity, etc., this involved the organization of a series of field-work undertakings. The immediate task of the department was to launch an investigation into a certain region in the very heart of Lapland which was to be submerged in connexion with the construction of a power-generating station; it covered all aspects of the Lapp culture surviving from olden times in that tract and was carried out in the summers of 1939 and 1940.

We also set to work in earnest on our general tasks and attached to the Lapp Department a body of some fifty informants—representatives from all the *Lappbyarna* (Lapp communities), the reindeer-breeding districts extending from a southern limit at Idre, a parish in the province of Dalecarlia, to the Torne-Muonio River, which constitutes the frontier between Sweden and Finland. Questionnaires concerning both the material side of Lapp culture and certain traits on the social and psychological side were sent to the informants with a view to collecting data which might facilitate our task and guide us in future field-work. The result thus obtained was above all expectation owing to the amazing interest shown by the informants, and before long a great many well written documents were being filed at the museum.

In 1943 the general investigation was launched as planned. It is still going on and will probably continue as long as finances permit and hands are available. The Lapp territory is an extensive field rich in buried treasures which require plenty of time for discovery. Up to the present, all the reindeer nomads' paths of migration, their encampments, supply-depôts, corrals, etc., have been mapped and in addition we possess descriptions, drawings, and photographs of ancient building styles, costumes, and various categories of objects. Further, we have put on record no less than 160 ancient places of worship, sacred stones (*seitar*, idols; sing. *seite*), and so forth. But there is still much to be done before the investigation can be looked upon as satisfactory, especially as regards certain districts inhabited by Forest Lapps; so far we have concentrated mainly upon Mountain Lapps.

An energetic operation has been started for the study of language and folk-lore under the supervision of Professor Björn Collinder at Uppsala University, in concert with the Dialect Archive. The whole expedition, properly equipped for the gramophone recording of the Lapps' colloquial language and *jojkning* (Lapp singing), has been visiting market-places and other localities in the Laplanders' territory, and has already recorded many a peculiarity characteristic of the ancient Lapp dialects and songs as well as much of their folk-lore. Docent Åke Campbell, head of the