THE ROLE OF TRANSPORTATION IN CHOCO
CULTURAL AND ENVIRONMENTAL CHANGE

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The region of the Chocó, along the Pacific Coast of the Republic of Colombia, is a legendary land of wealth. The Chocó was one of the fabled tierra ricas of conquest and colonial days, and continues to be thought of as such today. Even though located near that historic crossroad of mainland passage, the Isthmus of Panama, the Chocó remains today one of the lesser known regions of the Americas.

The Chocó is one part of the mosaic that is the tropical lands of the world. It is a lowland covered with verdant equatorial rainforest and fringed by tidal mangrove. The landscape is not a plain, but a dissected hill land. These forest-clad hills are the product of numerous cooperative physical processes, the most significant of which may well be the tropical climate. Temperatures rarely fall below 70° or rise above 90°F.; high relative humidity and large amounts of precipitation are characteristic. The Chocó is the rainiest place in the Americas. The core of the region, the Atrato-San Juan depression around Quibdó, receives slightly over 400 inches of rainfall annually; the regional average is over 120 inches. Rivers flow year-round with high water following the frequent rains and low water occurring during occasional three- to five-day rainless periods. At high water the rivers are charged with sediments; and as a consequence strips of fertile alluvium line the valleys. On the hills less fertile tropical latosols prevail.

The natural fauna, prior to the last few decades, ran the gamut of tropical American species.

Within this physical milieu Indians developed unique patterns of culture, unique ways of life. These patterns were inscribed on the landscape as the Indians occupied their territory and pursued their livelihood. Over the inhabited portions of the surface of the earth, both in dwelling and carrying on his economy, man has uniquely modified the landscape in correlation with his technology and cultural attitudes. This is one of the few working hypotheses geographers have extrapolated from their centuries of observing man-land relationships. The Indians of the Chocó have also left their marks on the land.

The purpose of this paper is threefold: first, to describe in brief the Indian culture, placing emphasis on the economy in its ecological context; second, to delineate the changes that have modified this way of life, with resultant changes in the landscape, and, third, to assess the role of the traditional mode of transportation, the Indian dugout canoe, in these changes. These observations concerning culture change, landscape change, and transportation are based on a short period of field work in the summer of 1961.1

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Map 1. Choco District, Western Colombia
Habitation of the narrow river valleys of the western lowlands of the Chocó is pre-Columbian. The Noanamá, one of the Indian groups of the Chocó, have traditionally occupied the central slopes of the region. Today they dwell in number only along the Río Siguirisía, a tributary of the Río Docampadó (See Map 1). This is the group and the area on which the paper will focus.

The Noanamá live in dispersed, raised-platform, extended-family houses on valley terraces and hilltops (Figure 1). The river fringes are the limits of human occupancy and the interior lands are uninhabited. The focus of livelihood is hunting, fishing, gathering, and shifting cultivation of a non-burning variety. In this system in pre-Columbian times stone tools were used to girdle trees and crops were planted in their decomposed material. Large amounts of energy were required to clear small forest plots. Crop growing was associated with the river margins, where trees were absent and soils rich. The dibble was used to plant the major root crop, sweet manioc or yuca. Maize, the staff of life, was broadcast over the mulch-covered fellings. The seeds of tree crops (the peach palm, the coconut, the cacao, and the calabash) were purposefully planted or casually tossed aside. In either case, the plants germinated, matured, and produced usable fruit. The Noanamá obtained the largest part of their protein and calcium from hunting, fishing, and gathering. Folk tales indicate these labors formerly occupied a more prominent position in the economy than they do at present. The bow and arrow, the blow-gun and poisoned dart, and the stout spear were the primary hunting tools before the introduction of firearms. Stealth and a consummate knowledge of the habits and sounds of the prey were the hunter’s techniques then. The dog, most important of the few domesticated animals, was used as a hound. Fishing produced the most constant source of meat and was carried on with spear, poison, and hook and line.

The pre-conquest patterns of Noanamá occupancy and economy on the landscape were distinct. Isolated houses were surrounded with small patches of crops, in view of the plantings near the river (Figure 1). According to legend, animal sounds came from the surrounding forest, and there were fish in the river. The variety of plants and animals consumed by the group was wide. The impact of the Noanamá, not “natural men” in the Rousseauan sense, on their resource base was less specialized and destructive than it is at present.

One of the prime characteristics of the inhabitants of the Chocó has been their mobility and riverine orientation. The Indian dugout, fashioned from a chachajo (Anibo, spp.), or cedro (Cedrela, spp.), is the most important mode of transportation in the Pacific lowlands from Ecuador to Panama. Before the introduction of European tools, the dugout was hollowed with stone or wooden tools or, perhaps, with fire. Today it is shaped


3 Field notes from Martin Diskin, Department of Anthropology, University of California, Los Angeles. These folk tales were recently presented as a Master of Arts thesis, unpublished, 1963.
Figure 1. The circular pile dwelling, or bohio, is located atop a hill and surrounded with plantings of plantains and bananas. Note the primitive steps and the means of anchoring dugouts in the river.

Figure 2. On a shingle beach in the mid-portion of the river this Naanama uses the sharp, steel hand adz to finish hollowing the dugout. Note the boy with his toy canoe.
with the ever-present axe and machete, and finished with a sharp steel adz (Figures 2 and 3). A sleek, tapering watercraft, 15 to 18 feet in length and from 1½ to 2 feet in breadth, the dugout is propelled against the current by poling or with the current by guiding with the paddle. The Noanamá are a riverine people and a great part of their lives is spent in dugouts. The movement of individuals and groups from river valley to river valley is totally dependent upon this watercraft. The challenge of the river is met with gusto and real enjoyment, as well as with considerable skill. Patterns of mobility along the rivers to local or distant goals, possibly as far as the upper Río Atrato, were well established prior to the Conquest. Some of this mobility necessitates overland transit. Foot trails from the headwater of one navigable stream to another tie the region together. However, the utilization of such trails is decidedly less frequent than travel along the "streets" of the rivers. Prior to contact with Old World ways the interchange of tools, techniques, and ideas took place within a discrete circuit. Noanamá technology was in tune with the neighboring cultures of the tropical lowlands of the Chocó.

The initial contact between the Spanish Conquistadores and the Noanamá was in the late sixteenth and early seventeenth centuries. Contact was later than in other areas of the Chocó because the territory of the Noanamá was between the points of oceanic contact and to the west of the route of overland travel. A few raids against the port of Buenaventura in the first decades of Spanish control earned the Noanamá the title índios de guerra. The Indians attacked the port after traveling along the coastal mangrove channels, or esteros, in their dugouts. Occasional raids by the Spanish into Noanamá territory resulted in pacification, and by the middle of the seventeenth century royal tribute was being collected. The Indians paid their assessments with food and by producing dugouts. In traveling to the centers of Spanish control the Noanamá likely came into contact with Old World crops, such as sugar cane, plantains, and bananas. Without doubt, they encountered Old World domesticated animals, tools of iron and steel, and a myriad of new sights and sounds.

In the early seventeenth century importation of African Negroes as slave labor for the gold placers of the Chocó was initiated. The Noanamá thereby met still another and different set of beings. This newly-arrived population brought a distinct gene pool, some African tropical diseases, new crops, and a highly-developed spiritual and oral tradition. Largely dispossessed of material culture traits, the Negro or Libre (the freed one, as he has come to be known) borrowed the bulk of his paraphernalia from the Indian. Crops and methods of cultivation, styles of house construction, and weapons for hunting and fishing were adapted, as well as the traditional transport craft, the dugout. The production of these latter items has never been fully mastered by the Negro. They are mainly purchased from the Indian. Such economic relations have been among the small number of intergroup functions. The growth of Negro population resulted in an un-

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5 Archivo Histórico Nacional de Colombia, Bogotá. Minas del Cauca V., f. 362 (1690).
Figure 3. Short, chopping strokes with the sharp, steel hand adz are used in the final stages of the hollowing process. A smooth surface is the result.

Figure 4. These Noanama men have just completed felling the surrounding forest with axe and machete. This is the final step in the regional system of non-burning shifting cultivation.
precedent imposition of man on the landscape. Negroes built their houses in isolated clusters on the margins of the main streams. They opened new lands to cultivation, and they hunted and fished in forest and stream. Through natural increase the Libre has become the dominant racial group in the Chocó.

With the ascendancy of Negro numbers and areas of occupancy, the Noanamá and other Indians of the Chocó retreated up the tributaries to the headwaters of the river networks. This was a matter of choice, not force. Rather than dwell near people they despised, the Indians moved upstream. As a result of these spatial constrictions, the migration of Indians very likely began to the Darien of Panama. For those who remained in Colombia, their resource range lessened with their isolation. Their "ecological elbow room" tightened in the upper drainage basins, where fish and game were limited in numbers. Though the pot remained full, vegetable foods became more important to the diet. The plantain sufficed for meat. The axe and machete were used to open greater tracts of forest for planting (See Figure 4).

By the early nineteenth century, dugout travel to the local trading post was commonplace. Occasional trips were made to the regional centers of Buenaventura and Quibdó. In traveling to and from these settlements new tools, techniques, ideas, and cultural attitudes were encountered. Machined cotton textiles, twopenny nails, axes, and machetes were the desired goods. By the twentieth century, shotguns and smallbore rifles, pots and pans, matches and carbide lamps, and muslin netting could be purchased. By the 1950's, even with the restrictions on firearms imposed by the Colombian government, few Indian houses were without such weapons. Negro compadres showed the Noanamá how to twine fish nets. These new hunting weapons, fishing tools, and associated techniques, gained through contact via the dugout, have resulted in a regional depletion of fish and game. Both the black spider monkey (Ateles, spp.), and the red howler monkey (Alouatta, spp.) and birds, such as the toucan (Rhamphastus, spp.), which were too high to be killed with poison dart or arrow, were exterminated with steel shot and .22 caliber bullets. One of the important economic species of fish (Sabalo, Brycon, spp.) has been all but eradicated through the unwise use of nets. Food growing has increased not only in area, but in economic and dietary importance. Plantings are now found the distance of a twenty-minute walk from the river, and there are more of them. Changes in technology, the same that are affecting the economy, diet, and landscape, have brought about the abandonment of many traditional institutions, attitudes, and modes of production. Social structure, patterns of authority, land tenure, folklore, religion, and household arts and crafts have changed. An interest in pesos to purchase matches, kerosene, carbide, or other western goods is rampant. The movement from

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6 This is in direct contrast to the ideas expressed by Robert C. Murphy, "Racial Succession in the Colombia Chocó," Geographical Review, Vol. 29 (July, 1939), p. 469.

7 This sentiment was expressed by Indian informants. It was verified and had its landscape impact in three places where Indian houses had been abandoned close to recently-settled Libres.
the traditional economy, based on subsistence and barter, toward a money economy is in progress. The transition may take the Noanamá, in the future, from the status of a primitive, traditional society to a peasant society or, perhaps, to disintegration. These changes will be reflected in an ever-increasing impact on the resource base of the Noanamá.

In conclusion, the mechanism behind cultural and environmental change among the Noanamá of the Chocó, as elsewhere in much of Latin America, has been contact with new tools, techniques, ideas, and cultural attitudes. Changes began with the contact between Indian and Spaniard and were furthered by contact between Indian and African. The most striking changes have occurred in the last half century with the contact of Indian and western culture. Within the humid tropical land of the Chocó the avenues for contact in the past, as in the present, have been the fluvial “streets.” These have been the routes of cultural connectivity. The mode of transportation in aboriginal times, as today, has been the Indian dugout. The motivations then, as now, were primarily economic, social, and ceremonial. Though the pattern and range of mobility has increased little, and the frequency of movement is not radically different, what lies at the ends of the lines has drastically changed. The dugouts have been the receptacles; they have carried the seeds of cultural change, and thus environmental change, back to the headwaters of the rivers, the centers of Indian occupancy.

In many other parts of the culture region of Latin America new tools, ideas, and ways of doing things are brought to the inhabitants by traditional and modern modes of transportation and communications. The role of these techniques of movement of goods and ideas in the modification of the cultures and environments of Latin America is largely undetermined; it presents numerous topics for further consideration.