

FILIPINO EARS: III. NEGRITO.

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The Negritos of the Philippines have been studied at close range by Meyer, Montano, Reed, and others, and from a distance by many anthropologists, including Virchow and Blumentritt. Dean C. Worcester, Secretary of the Interior, has visited Negritos wherever they exist in the Archipelago, and it is through his generosity in placing at my disposal the photographs of his inimitable collection and of the Bureau of Science, from which materials are drawn for this and subsequent studies of the non-Christian tribes, that I am enabled to produce this publication.

This is the first of a series dealing with the ears and other physical characteristics of the Philippine Islanders of the interior, and follows studies previously completed of the ears of Manila pedestrians and riders, Bilibid prisoners, morgue subjects, and the men and women of Taytay, Rizal Province, Luzon.

The Negritos are the first of the non-Christian tribes selected for study, (1) because they are relatively few in number and, undoubtedly, are gradually disappearing, since they lose their purity when they come into contact with surrounding peoples; (2), because very few studies of Negritos have been made dealing with the physical characteristics of the living; (3), because no previous study has been made of their ears; and finally (4), because a large number of representative photographs of Negritos from many parts of the Islands could be obtained.¹

¹ The photographs have been derived from several sources, and have been taken at various times by different men, therefore some difficulty has been experienced in reproducing them uniformly. The photographs of the Negritos of Bataan or Mariveles Mountain, of Itebela and Pampanga Provinces, and some of those of Palawan Island and elsewhere, were taken by Dean C. Worcester. The Negritos of Zambales were photographed by William A. Reed and others; those of Cagayan by Charles Martin, of the Bureau of Science; the Tinian and others (Bataks) in the Island of Palawan by Lieutenant E. Y. Miller while he was governor of Palawan Province; and the photographs of the Negritos of the Island of Panay, Provinces of Antique and Capiz, and Ambos Camarines, Luzon, were taken by Doctor M. L. Miller, chief of the division of ethnology, Bureau of Science. These are groups from which photographs are presented, with the addition of a few others.

It is to be noted that Negritos still remain in the Philippines, from Palawan in the south to the extreme northern end of Luzon. Not only is the distribution of the Negritos general throughout the Islands, but the types selected show a similar general distribution, although slight local resemblances exist. The Negritos of a single locality have evidently inbred, yet the possibility of intermixture with the surrounding populations can in no instance be disregarded.

The literature dealing with the Negritos is not available. The monumental work of Meyer has not been accessible, and the only available publications dealing with physical measurements have been limited in the number of individuals measured. The work of Reed² represents fairly well the Zambales Negritos in a series of photographs which is a most complete portrayal of a single group, but the physical characteristics are otherwise not treated fully. This is the first attempt ever made, in the manner of this study, to analyze the types of a group of individuals from photographs, and although I present the results with some trepidation, yet I believe my previous studies of the ear and the use of descriptions rather than measurements, enable me to characterize the types with a fair degree of accuracy.

DESCRIPTION AND CLASSIFICATION OF TYPES.

Before beginning the study of the Negrito ears, it may be well to describe the typical Primitive and Iberian ears and physiognomy, because they represent fundamental Negrito types.

Primitive ears are characterized essentially by the inrolled helix with inversion of the concha. This gives the appearance of a hollow bowl with the rim prominent at the upper part of the helix and at the lobule, and depression of the bowl's rim at the ventral and dorsal parts of the ear. A shelf is thus formed both above and below, the internal part of the superior border of the helix forming the superior surface of the upper shelf, and the external part of the lobule the superior surface of the lower shelf. The concha is short in its vertical, and wide in its horizontal, diameter, although this is not invariably true.

Iberian ears are marked essentially by the eversion of the concha and the consequent turning back of the helix, particularly in its lower half. This results in an old-English small-letter *f*-shape of the helix rim as viewed from behind. The lobule is pendant or turned backward toward the head, and frequently is absent as in type B, or square as in type C, in contrast with the lobule of the Primitive, which is turned forward and upward, this point alone often being sufficient to distinguish either of the two types of ears.

² Negritos of Zambales, *Ethnological Survey Publications*, Manila (1904), 2, pt. 1.

The Primitive ear is usually round, the Iberian, long. The physiognomy of the Primitive, in general, is broad and flat. The forehead is small and prominent, the brow ridges insignificant. The nose is broad, flat, and depressed at the bridge, which is often totally lacking. The nostrils open somewhat forward rather than downward. The mouth is not wide, but the lips are thick, and the chin is small and receding.

The physiognomy of the Iberian is in every characteristic almost the reverse of the Primitive. The face is long, narrow, and projecting, with considerable facial prognathism, with an acute angle formed by lines joining the glabella with the external auditory meatus. The forehead is square and the brow ridges small. The nose is narrow, high, and long. The nostrils point downward, and do not flare. The mouth is not large, and the lips are thin. The chin is pointed, but often projects slightly instead of receding. The chin and forehead of the Iberian and Primitive are not so unlike as are the other features, the great differences between the two faces being in the middle parts, where width and flatness in the Primitive and narrowness and projection in the Iberian are the distinctive characteristics.

ANTHROPOLOGICAL TYPES ILLUSTRATED BY PHOTOGRAPHS OF EARS.

PLATE I.

The two fundamental ear types, Primitive and Iberian, that characterize the Filipinos wherever I have examined them, apparently form basic types of Negrito ears. These two types of ears on both man and woman may be seen in Plate I. Figures 1 and 2 represent a characteristic Negrito woman of the Primitive type from Mount Mariveles, Bataan Province. But for the bushy head of hair, this photograph would well represent a Primitive Filipino such as may be seen in almost any part of the Islands. The ear can not be seen well but enough of it is shown to reveal the Primitive characteristics. The shelf lobule is seen on the right ear, and the rounded contour, with overturned helix on the left. Other Primitive traits may be seen, such as the broad, flat nose with depressed ridge, flaring nostrils, and apertures that open forward instead of downward; the vertical, or *bombé*, forehead that is particularly small in its transverse dimension; the thick, projecting lips; and the small, receding chin.

The two men of figures 5 and 6 are not so typical of the Primitive as is the woman, but they approach the form more closely than any other male Negritos portrayed. The Negrito men in general are not of the Primitive type, but the majority of the women are of this type, a statement that will become evident as the study progresses.

The woman of Zambales in figures 3 and 4 is said to be Negrito, and if that be true the pure Negrito is a Modified Iberian. The ear has a combination of Primitive and Negrito characteristics. The inrolled,

overturned helix is Primitive, and the slightly everted concha below and pendant lobule suggest the Iberian. The nose is straight, not very wide and flat, and the other features of the physiognomy resemble the Iberian as much as the Primitive. However, this woman is not so good a representative of the Iberian Negrito as the man of Zambales portrayed in figure 8, who is almost a typical Iberian. The ear is long with pendant lobule, everted concha, and spiral helix. The nose is long and straight, and the other features resemble the Iberian. The hair is curly, rather than kinky, and I venture to state that this is a European-Negrito cross.

The man of figure 7, also seen in figures 1 and 2, Plate II, is called by title in Mr. Worcester's catalogue "an excellent type," yet this man has Iberian ears and physiognomy. It is true that they are not perfect Iberian, but the ear has an everted concha, slightly spiral helix, and somewhat dependent lobule. The nose is straight and somewhat pointed. Other features resemble the Iberian.

PLATE II.

The remainder of the Negritos represented in Plate II are also of the Iberian type. Figures 3 and 4 are photographs from the negatives used by Keane on pages 220 and 232 of *The World's Peoples* to represent a Negrito of the Philippines. The ear can not be seen well but presents the everted concha and pendant lobule characteristic of the Iberian, and the sharp, straight nose, and other characteristic features also denote the Iberian. Keane also gives a picture of "Ardi, one of the last of the Kolangs," the aborigines of Java, whose ear is Iberian in type, not unlike that of the Negrito in Plate I, noted by Mr. Worcester as "a full-blood." The physiognomy of Ardi, who is called by Keane "the most ape-like of men," is that of a degenerated Iberian.

Figures 5 and 6 are rather good photographs of Pagatolan, a Negrito chief of Isabela, who "has had three albino children, two of whom are living and to one of whom he had given Christian baptism. He states that God has been very good to give him white children, and that he proposes to send them to school." This Negrito is decidedly Iberian. The long, straight, pointed nose, the pointed chin, and the square forehead are all evidences of the Iberian. Unfortunately the ears do not show well, although the lobule and lower helix and concha resemble the Iberian. The albino children may be expressions of Mendelian heredity from a previous European-Negrito cross.

Figures 7 and 8 represent a Negrito said to be of pure type (Reed, Plate XII), but again the Iberian is evident. However, the ear is not of unmixed type and the Iberian traits are not very well marked, although the concha is everted, and the lobule is square.

PLATE III.

This plate exhibits Negrito women of the Primitive or Modified Primitive types from Ambos Camarines, Mount Mariveles, and Palawan Island. It is needless to point out the Primitive characteristics, but the broad, flat nose with depressed bridge and nostrils that open more forward than downward, and the shelf-like lobule of the ear may be seen on each individual.

It may be of interest and significance that the Negrito women shown in all the photographs are almost entirely of the Primitive type, whereas the men are Iberian. If Pearson's law be true, that males inherit more from the father's side and females from the mother's, then the men who have impregnated the Negrito women were of the Iberian type and the impregnated women were of the Primitive.

PLATE IV.

The Negritos portrayed in Plate IV are variable blends of the Iberian and Primitive. Figures 1 and 2 represent a purer Iberian ear than the others. The concha is everted, the lobule attached directly to the cheek at its lower margin, and there is a slight outward twist of the upper part of the helix. The other features are blended, although the nose is slightly aquiline. Figures 3 and 4 represent a less pure Iberian ear than figures 1 and 2. The ear has a Primitive bend or knee at the junction of the lower and middle thirds, and the lobule tends to form a shelf, but does not quite perfect the tendency. The nose is large and straight and the other features are neither perfect Iberian nor perfect Primitive. The Negrito of figures 5 and 6 is less Iberian and more Primitive than the one of figures 3 and 4. The ear is very slightly Iberian in the eversion of the concha and slightly spiral helix, whereas the Primitive characteristics are marked in the rounded contour, outward, overturned, upper helix, and shelf-like lobule. The other features are blended Iberian and Primitive.

The Negrito of figures 7 and 8 is very slightly Iberian, although the nose is somewhat straight and the nostrils open downward. The ear is blended, with Primitive characters predominating.

PLATE V.

Plate V presents variable, female blends. However, each partakes largely of the Primitive type, and in none is the Iberian very well marked. Figures 1 and 2 show almost pure Primitive ears, although the nose is not Primitive. Figures 7 and 8 show forms simulating Iberian, but the Primitive ear is still apparent. The forms of figures 3, 4, 5, and 6 are blends of varying nature more or less intermediate between those of figures 1 and 2, and 7 and 8. The women again present Primitive, and the men Iberian, characteristics in the blends as in the purer types.

PLATE VI.

However, Iberian characteristics may appear in hybrid, female Negritos. Evidence of this is furnished in Plate VI, figures 1 and 2, which represents an old Negrito mestiza. The left ear is almost typical Iberian, with everted concha, pendant lobule, and spiral helix, whereas the right ear is somewhat more Primitive in character, with a slightly shelf-like lobule and overturned superior helix, although the latter may be due to pressure from the overhanging hair. The nose is straight and neither very wide nor flat, and the skin appears light in color.

In figures 3 and 4, Iberian characteristics of the ear also appear, although less marked than in figures 1 and 2, but the other Iberian characters, although present to some extent, are not so well seen.

Figures 5, 6, 7, and 8 are placed alongside each other to illustrate two old Negritos with Modified Primitive characteristics.

PLATE VII.

Other ear types, besides the Primitive and Iberian and their blends, appear among the Negritos. The Alpine ear of the same nature as that observed on many Filipinos other than Negritos may be seen in Plate VII. Figures 1 and 2 represent a so-called pure Negrito of Ambos Camarines. The ear is Alpine, having a shelf-like lower helix inserted diagonally downward into the cheek. The ear does not form a double shelf above and below by the turning in of the helix at its upper and lower parts, but there is a slight turning at both ends which indicates Primitive characters. There is also a slight spiral twist to the helix, an eversion of the concha, and the insertion of the lower helix or lobule which suggests the Iberian. Therefore this ear must be considered as an intermediate form of the Primitive and Iberian, retaining qualities of both, yet different from either, forming a kind of mosaic, which is a true ear-type.

The physiognomic characteristics of this man are also intermediate between the Iberian and Primitive. The nose is neither broad and flat nor long and straight, the forehead is both square and *bombé*; the lips are not full, nor is the chin markedly receding. Figure 5 represents another Negrito man from Ambos Camarines; here the ears are also Alpine, although slightly more like the Primitive than in the other Negrito from the same place.

The Negrito man of figure 6 is also a Camarines native with Alpine ears, in which the Iberian qualities somewhat overshadow the Primitive.

The other features of the two men are those of the Alpine type, either a blend of Iberian and Primitive or a mosaic of the two. The four remaining figures (3, 4, 7, and 8) of Plate VII probably represent crosses between the Negritos and neighboring Malays, and they portray men of the Alpine type. The character of the ears and physiognomy

of the man in figures 3 and 4 is nearer the Iberian than the Primitive, and the same features of the man in figures 7 and 8 are nearer the Primitive than the Iberian.

PLATE VIII.

Plate VIII illustrates variable forms resembling the Alpine, although none are perfectly true types, but rather a group of atypical, Alpine ears resembling both Primitive and Iberian, some more like one type and some more like the other. Figures 1 and 2 represent a Mariveles Negrito man more Iberian than Primitive; figures 3 and 4 represent a Negrito man from the Island of Burucay, a part of the Province of Capiz, off the northwestern point of the Island of Panay, who is more Primitive than Iberian. The man in figures 5 and 6 is a Negrito from Casablanca, Cagayan Province, northern Luzon, who is probably also more Primitive than Iberian. Figure 7 is almost an Iberian, and figure 8 is almost a Primitive; the one, a man from the Island of Burucay, "with considerable Visayan blood," and the other, the "chief of the Mariveles tribe, who is a typical Negrito, and, like many of the men of his tribe, has quite an abundant growth of hair on the face."

The many forms of blended ears intermediate between the Iberian and Primitive belong to the Australoid type wherever the ear form is not that of the Alpine. The Negrito-Australoid is not unlike the Filipino-Australoid from different parts of the Islands, and the characteristic, large, straight nose may be seen on practically all the photographs of this type. It is well marked in all the figures of Plate VIII.

PLATE IX.

The Australoid nose may be seen clearly in figures 1, 2, 3, and 4, Plate IX, and somewhat modified in figures 5, 6, 7, and 8 of the same plate. The ears are all modified Primitive, and may be called Australoid ears.

PLATE X.

The ears previously described in this study have been similar to those of other Filipino populations throughout the Archipelago and no distinctive Negrito ear has been demonstrated. However, there is a type of ear that is presented as the true Negrito ear, although it may prove to be only a variant of one of the forms previously described, or it may be Australoid. It is seen distinctly in figures 1, 2, 3, and 4 of Plate X (and in figs. 3 and 4 of Pl. IV), in combination with the Australoid nose. It is seen in modified form in figures 5, 6, 7, and 8, where the nose is also somewhat modified. The characteristic of this ear is the offset in the helix at the point where the lobule begins. This is in the form of an indentation on both the ventral and the dorsal surface of the helix, and gives a shelf similar to that of the Alpine ear, although the lobule does not pass immediately to the cheek, but projects downward

and forward in a rigid, rounded point. This ear form is simulated by many that have Primitive characteristics, as may be seen in Plate A where the three Negritos from Pampanga have this ear type. The Australoid nose is especially plain in the man in the center of Plate A.

PLATE XI.

The true Negrito ear is seen in modified form in all the figures of Plate XI where the nose is not typically Australoid, but also modified. Observations of living Negritos, with physical measurements, may be necessary to determine the relation of this ear to the physical type. At present it appears to be one of the most frequent forms and apparently the true ear-type. It may be regarded as a blended type derived from the Primitive and Iberian which has been differentiated from both in the processes of fusion.

PLATE XII.

Plate XII is presented to illustrate the results of combinations of types that have intermingled, and thus enables us to understand the processes by which amalgamation progresses. Figure 1 is an Iberian Filipino with perfect, Iberian, type A of ears, probably a Spanish-Filipino mestizo. If such a man should impregnate a Negrito woman of the Primitive type seen in figure 2, the result might be the production of two individuals similar to those in figures 3 and 4, where blending is evident. The further impregnation of Negrito women by such blended individuals might produce men similar to those portrayed in figures 5, 6, 7, and 8, in which the kinky hair and dark skin of the Negrito appear because they are dominant, and in which the Iberian and Primitive ears and physiognomy remain blended to some extent, although one may partake more of the Primitive and another of the Iberian. The union of individuals of the blended type might also reproduce according to Mendel's law; the offspring would then be in the ratio of three Negrito Primitives to one Filipino-Iberian, provided the former is dominant.

DISCUSSION.

Three possibilities in the heredity of Iberian and Primitive characters are apparent from the study of the ears and physiognomy of the Negritos: First, there is blending with the production of a hybrid that has curly or wavy hair, ears that are part Iberian and part Primitive without the distinctive characters of either, and a nose that is straight, yet wide and not high; second, there is persistence of both Iberian and Primitive ears and physiognomy, each type accompanied by kinky hair; third, there is a mosaic ear, the Alpine, some parts of which are Primitive and others Iberian, and which, slightly modified, occurs in connection with kinky hair and Iberian physiognomy.

It remains to be determined exactly what takes place in the heredity

of cross-bred races such as the Iberian and Negrito, or the Filipino and Negrito, but the indications are that there is blended heredity, mosaic heredity, and persistence of type which suggests Mendelian heredity. There exist among the Negritos forms of hair, nose and ear, as well as other features of the physiognomy, intermediate at almost every conceivable point between the widest extremes, and the general effect is that of disorderly blendings as represented previously by a scheme for heredity of type.

Several suggestions seem pertinent. The Negrito was originally of the Primitive type and contact with the Iberian has resulted in the production of various new forms, such as the Alpine and Australoid, with the retention of the two other types, Primitive and Iberian; or the Negrito was originally of the Australoid type and has been impregnated with the Primitive and Alpine through the Malay migrations, and the Iberian through the Spanish occupation of the Philippines, with the retention of these types and the formation of intermediates between them; or, the Negrito was originally Iberian and has become mixed with Primitive, Alpine, and Australoid forms through subsequent infusions from various sources; or, the Negrito was originally of a composite form embodying the Primitive, Australoid, and Iberian, from which these and other types have arisen; or, the true Negrito form has become lost through incessant intermingling, leaving only the small size, dark skin, and kinky hair; or, the Negrito represents a degenerated product with many possible forms tucked away under the kinky hair and dark skin; or, various combinations of all these suggestions may be the truth.

Whatever may have been the conditions, there can be no doubt that the Negrito of the Philippines is not a pure race, but one composed of at least two forms, the Primitive and the Iberian, which are almost exact antitheses in the cardinal anthropomorphic qualities, and of the Australoid, which is a combination of the two forms.

The most plausible hypothesis as to the composition of the Negritos is that they were originally of the Primitive type, and subsequently became impregnated with the Iberian, because the women are largely of the Primitive type and the men of the Iberian. The Iberian impregnation must have come at a time previous to the Spanish possession of the Islands, or at least it was other than Spanish or even than Filipino or Chinese, or else there would be found Negrito types similar to the Adriatic, Cro-Magnon, and B. B. B., all of which are present in the living Spanish, Chinese, and Filipino population of the Philippines, unless it be that these types, which are greater in size than the Iberian, are incapable of impregnating the Negrito and fecundity is possible only with the Iberian. It is probable that the Iberian and Primitive united in the Negrito before their arrival in the Philippines, or at a very

early period in the Philippines before the arrival of the first Malay migration; therefore, their origin should be sought elsewhere, probably in Asia.

Davenport's hypothesis, that straight hair is recessive and kinky or curly dominant, is corroborated by finding many straight-haired forms, such as the Iberian and Primitive, with kinky hair, although blending in hair-form is evident among the mixed Malay Negritos. This does not necessarily imply that straight hair would not be dominant and curly hair recessive under different conditions, as among the other peoples of the Philippines not Negritos, where the kinky hair of the Negrito has probably often appeared and, I believe, disappeared. Probably the truth of the matter is that when two extremes of hair-form are crossed, such as the Malay and Negrito, the first results are blends, with afterwards a return, more or less pure, to the original forms; but in the end the kinky hair of the Negrito is retained when the cross takes place continually among the Negritos, and the straight hair when the crossing is continually among the Malays. In this manner extraneous types are bred out.

The photographs of the Mariveles Negritos were all placed upon a large table before me, and when I scrutinized them carefully I realized that I was looking into the familiar faces of a people among whom I was born and with whom I grew up. Practically every face recalled youthful associations, and every individual of the Mariveles group has its counterpart among American Negroes.

The photographs of the Negritos from other parts of the Philippines were likewise disposed upon a large table, replacing the Mariveles Negritos; the familiar faces of the homeland vanished, but in their places appeared the faces that one meets every day in Manila or in the provinces, familiar Filipino types. A few of them still resemble the American Negro; this is particularly true of the Negritos of Isabela Province.

These casual observations must be taken with reservations, because no data can be given to substantiate them; but I believe they indicate a close relationship between the Negrito of the Philippines and the African Negro.

ANTHROPOLOGICAL TYPES ILLUSTRATED BY FULL-LENGTH PHOTOGRAPHS.

PLATE XIII.

Plates XIII to XVII represent the full figure of Negritos, and most striking differences may be seen in the length of the lower extremities of different individuals, and in different groups. The six Mariveles Negritos in Plate XIII have relatively long lower extremities; one is a very tall Negrito, his stature being due to his great leg length. This man is as tall as the average European, judging from the photograph taken by the side of Dean C. Worcester, who writes, "this is the tallest Negrito man I have ever seen."

The Mariveles Negritos are mixed Iberian or Australoid in type without exception, all having the big, straight nose characteristic of the Australoid.

PLATE XIV.

The Negritos of this plate decrease in the relative length of the lower extremity from left to right, and the type varies from Australoid to Primitive with the decrease of relative leg length. The two Negritos on the left, figures 1 and 2, are Australoid or Modified Iberian, the two on the right are Primitive or Modified Primitive, and the two in the center are intermediate forms. The Negrito of figure 1 is from Mariveles Mountains and the Negrito of figure 6 from the neighboring Zambales Mountains, but in spite of the proximity of their abodes they are very unlike. The differences apparent here are the long legs, face, and nose of the Mariveles Negrito and the short legs, short, wide nose, and short, wide face of the Zambales Negrito. These differences indicate Iberian affinities for the Mariveles Negrito, and Primitive for the Negrito of Zambales. The differences are apparent, not only in these two individuals, but also in the two groups from the Provinces of Bataan and Zambales. Negritos from other parts of the Islands resemble one or the other group, but are usually intermediate, and represent greater blending with the surrounding population.

PLATE XV.

The Zambales Negrito of figure 2 with short legs is here contrasted with a Negrito of Cagayan Province in figure 1 with intermediate leg length and a Negrito of Isabela Province in figure 3 with long legs. The Zambales Negrito is almost pure Primitive, the Isabela Negrito almost pure Iberian, and the Cagayan Negrito is intermediate in type, the result of Malay or Igorot mixture rather than Negrito. The small Negrito boy of figure 5 with short legs may be contrasted with the old Negrito man of figure 4 with intermediate leg length. This boy is from Cagayan, and when full-grown would probably have legs of intermediate length. An illustration of three small Negrito boys of Mariveles Mountain would have been presented showing long legs in youth, although relatively not so long as those of the adult Negritos of Mariveles, but the photograph was not good enough for reproduction. One may infer from this that relatively short legs represent a youthful condition, but the relative length of individual development is not enough to overcome that of conditions due to type, at least in this instance. In other words, phylogony is of stronger or greater extent than ontogeny. There is a greater difference between the Mariveles Negritos and the Negritos of Cagayan than between the men and the boys of Mariveles or between the men and the boys of Cagayan.

PLATE XVI.

The Negritos shown on Plate XVI are all mixed with the surrounding peoples and partake of their characteristics. The leg length is intermediate, although the central figure, a Negrito from Cagayan, has relatively shorter legs than the others.

PLATE XVII.

The Zambales Negritos shown on Plate XVII are very much mixed in type, and the variable length of leg indicates the mixture as much as any other character. The men on the right of each figure have shorter legs than the others, and the man next to the one on the left in figure 1 and the one next to the right in figure 2 have longer legs. Here, as elsewhere, the Primitive characteristics go with short legs and the Australoid with long legs.

SUMMARY.

The Mariveles Negritos, who are apparently purer in type than any other group and who are largely of the Iberian and Australoid types, have relatively longer lower extremities than any other group of Negritos represented by photographs; the Zambales Negritos, who are largely mixed and of the Primitive type, have relatively shorter lower extremities than any other group; and the remaining groups, who are also much mixed and intermediate between the Iberian and the Primitive, have lower extremities of intermediate length.

It would appear from the photographs of the full figure that the purest Negritos are to be found in the Mariveles Mountains, and these Negritos are of the Australoid type, which is probably a combination of Iberian and Primitive that has almost reached the stage of complete amalgamation. The Iberian characteristics are more or less pure in some individuals, the Primitive are likewise more or less pure in some, but the greater part represent a complete blend of the Iberian and Primitive that conforms to the type previously designated by me as Australoid, which is found among the Igorots and all the littoral Filipinos so far examined.

CONCLUSIONS.

Any conclusion reached after a study of the photographs presented must be tentative and subject to revision. However, it does appear that there are many inseparable factors in the composition of the individual, such as the ear form, nose and face form, length of the extremities, that constitute a *character-complex* which exists as an entity and in inheritance may act as a unit character.

A *character-complex* is that group of characters, such as the broad head, broad nose, broad face, and characteristic ear that, combined with small stature, constitute the Primitive species, which character-complex usually hangs together in heredity, but may break up to form new character-complexes.

There is blending of one character-complex with another, but this blending probably does not take place at once upon crossing two extremely different character-complexes such as the Iberian and Negrito, but results in the reappearance of one or the other character-complex in pure form as shown in figure 8, Plate I, where the true Iberian is obscured by having kinky hair and dark skin.

From this follows the second conclusion, which is that the kinky hair is dominant to the straight hair when the cross takes place among the Negritos, therefore a character-complex may be obscured by the kinky hair, so that an otherwise pure Iberian may appear to be a Negrito because of the character of the latter characteristic.

The Negritos of Mariveles Mountain appear to be the purest Negritos in the Philippine Islands, judging from the photographs. All other groups of Negritos are more like the surrounding population. Therefore, the Negritos of Mariveles should represent the fundamental Negrito type, and, as they are largely Australoid, the fundamental type of the Negritos should be Australoid. However, the Australoid is composed of the Primitive and Iberian types which have fused in a disharmonic manner, forming a mosaic. Modified Primitive and Modified Iberian Negritos are also found in the Mariveles group. The women are more Primitive than the men, who are more Iberian and Australoid than the women. The Primitive and Iberian characteristics of the Mariveles Negritos are of such a nature that they should be considered as remnants of the fusion which must have progressed for many centuries or even thousands of years to have produced so homogeneous a blend.

May it be presumed that the Primitive and Iberian types conjoined in prehistoric times at some place in eastern Asia or near by, and by fusion produced the Negrito? From this union innumerable offshoots have sprung in southern Asia, in the islands bordering that region, and also in Africa. The Primitive type remains pure in parts of the East, and the Iberian in Europe. If this hypothesis be untrue, the reverse of it should be considered: The Negrito forms the basic stock of all humanity, and the Iberian of Europe on the one side and the Primitive of the Orient on the other are derivatives. If neither hypothesis be *workable*, then the Negrito of Mariveles has Primitive and Iberian characteristics ingrafted from without. Whatever may be the cause of the condition, there are three types found among the Negritos: the Australoid, the Primitive, and the Iberian; and these three types are found also among all the other peoples of the Philippines wherever I have examined them. The Primitive and the Australoid types, and doubtless the Iberian, are found in all the islands of the Pacific where search has been made and careful analysis of the people has followed.

The more profound the study of mankind, the more profound becomes the impression that the Primitive and Iberian are two fundamental types.

ILLUSTRATIONS.¹

PLATE A. TRUE NEGRITO EARS.

- FIG. 1. Negrito man of Pampanga Province, showing pointed tooth. (Photograph by Worcester.)
2. Negrito man of Pampanga Province. (Photograph by Worcester.)
3. Negrito woman of Pampanga Province, showing pointed tooth. (Photograph by Worcester.)

PLATE I. MODIFIED PRIMITIVE AND IBERIAN NEGRITOS.

- FIGS. 1 and 2. Front and side views of head of full-grown Negrito woman of Batnan Province. Primitive. (Photograph by Worcester.)
3 and 4. Front and side views of head of Negrito woman of pure blood, of Zambales Province. Modified Iberian. (Photograph by Worcester.)
5. Pure Negrito of Ragay, Ambos Camarines Province. Lives near town and works for Filipinos. Primitive. (Photograph by Worcester.)
6. Head of full-grown Negrito man of Bataan Province. This man is a full-blood and is an excellent type. Modified Iberian. (Photograph by Worcester.)
7. Head of Negrito man of Zambales Province. Modified Primitive. (Photograph by Worcester.)
8. Side view of a Negrito man of mixed blood, of Zambales Province. He evidently has had the back of his head shaved but the hair has begun to grow again. Iberian. (Photograph by Diamond.)

PLATE II. MODIFIED IBERIAN NEGRITOS.

- FIGS. 1 and 2. Front and side views of full-grown Negrito man of Bataan Province. (Photograph by Worcester. See Plate I, fig. 6.)
3 and 4. Front and side views of Negrito man of Zambales Province.
5 and 6. Front and side views of head of Pangasinan, a celebrated chief among the Negritos of Isabela Province. (Photograph by Worcester.)
7 and 8. Front and side views of head of an old Negrito of Zambales Province.

PLATE III. PRIMITIVE NEGRITOS.

- FIG. 1. Negrito woman at Ragay, Ambos Camarines Province. (Photograph by Miller.)
2. Negrito woman near Batobalani, Ambos Camarines Province. (Photograph by Miller.)
3 and 4. Front and side views of head of Negrito woman near Batobalani, Ambos Camarines Province. (Photograph by Miller.)

¹The descriptions used in these illustrations are taken from Mr. Worcester's catalogue.

- FIG. 5. Side view of head of typical Negrito woman, Batana Province. (Photograph by Worcester.)
6. Negrito woman near Batobulani, Ambos Camarines Province. (Photograph by Miller.)
7. Batak woman (type 8), Palawan Island. Profile view. (Photograph by Worcester.)
8. Profile view of young married Negrito woman of Batana Province who is suffering from a scaly disease of the skin common among the wild tribes of the Philippines. (Photograph by Worcester.)

PLATE IV. VARIABLE BLENDS OF PRIMITIVE AND IBERIAN NEGritos.

- FIGS. 1 and 2. Captain Fernando del Barco. Negrito man near Batobulani, Ambos Camarines Province. Modified Iberian. (Photograph by Miller.)
- 3 and 4. Side and front views of chief of the Mariveles tribe, of Batana Province, who is a typical Negrito, and like many of the men of his tribe, has quite an abundant growth of hair on the face. Blend. Australoid? (Photograph by Worcester.)
- 5 and 6. Front and profile views of young Negrito man, Batana Province. Blend. (Photograph by Worcester.)
- 7 and 8. Front and side views of Negrito man, Cupiz Province, Panay, of nearly or quite full blood. Modified Primitive. (Photograph by Miller.)

PLATE V. VARIABLE BLENDS OF IBERIAN AND PRIMITIVE NEGritos.

- FIG. 1. Profile view of Negrito woman of Zambales Province. Modified Primitive.
2. Side view of young unmarried Negrito girl of Batana Province. Modified Primitive. (Photograph by Worcester.)
3. Side view of Negrito girl of Zambales Province. Blend. (Photograph by Diamond.)
4. Side view of middle-aged Negrito woman of Batana Province. Blend. (Photograph by Worcester.)
- 5 and 6. Front and side views of Negrito woman, Cagayan Province. Blend. (Photograph by Martin.)
7. Old Negrito woman of Zambales Province. (Photograph by Miller.)
8. Side view of Negrito woman of Pampanga Province. Modified Iberian. (Photograph by Worcester.)

PLATE VI. MODIFIED IBERIAN AND PRIMITIVE NEGritos.

- FIGS. 1 and 2. Front and side views of old Negrito woman of Cagayan Province. Modified Iberian. (Photograph by Martin.)
- 3 and 4. Front and side views of Negrito man near Batobulani, Ambos Camarines Province. Modified Iberian. (Photograph by Miller.)
- 5 and 6. Front and side views of a very old Negrito woman of Batana Province. Primitive. (Photograph by Worcester.)
- 7 and 8. Front and side views of an old Negrito man of Zambales Province. Primitive.

PLATE VII. NEGrito ALPINE RACES AND TYPES.

- FIGS. 1 and 2. Front and side views of pure Negrito of Ilagay, Ambos Camarines Province. Liven near town and works for Filipinos. (Photograph by Miller.)
- 3 and 4. Durengat man of Kalawat, Kalawat Island. Probably a cross between Negrito and Malay. (Photograph by Miller.)

- FIG. 5. Negrito man at Batabalani, Ambos Camarines Province. (Photograph by Miller.)
 6. Negrito man at Bagay, Ambos Camarines Province. (Photograph by Miller.)
 7 and 8. Front and side views of young Batak man (Type 1) of Tinnbog, Palawan Island. Note the typical hair-cut. (Photograph by Worcester.)

PLATE VIII. VARIABLE ALPINE NEGRITOS.

- FIGS. 1 and 2. Front and side views of old Negrito man of Bataan Province. (Photograph by Worcester.)
 3 and 4. Front and side views of Negrito man of nearly or quite full blood, of Capiz Province, Panay. (Photograph by Miller.)
 5 and 6. Front and side views of Negrito man of Cagayan Province. (Photograph by Martin.)
 7. Side view of Negrito man of Capiz Province, Panay, with considerable Visayan blood. (Photograph by Miller.)
 8. Side view of chief of Mariveles tribe, Bataan Province. See Plate IV, figs. 3 and 4. (Photograph by Worcester.)

PLATE IX. AUSTRALOID NEGRITOS.

- FIGS. 1 and 2. Side and front views of Negrito man of Capiz Province, of nearly or quite full blood. (Photograph by Miller.)
 3 and 4. Side view of chief of Mariveles tribe, of Bataan Province. See Plate IV, figs. 3 and 4. (Photograph by Worcester.)
 5 and 6. Front and side view of full-blood Negrito woman of Zambales Province. (Photograph by Diamond.)
 7 and 8. Front and side views of young Batak woman (type 8) of Tinnbog, Palawan Island. Note the head ornaments and the method of carrying cigar thrust in the head dress. (Photograph by Worcester.)

PLATE X. TRUE NEGRITO EARS. AUSTRALOID?

- FIGS. 1 and 2. A Negrito man of Cagayan Province. This man had the curly hair of his race, but managed through frequent combings to straighten it out to its present condition. He also used some special kinds of native oils to attain this purpose. Note the expression given to the countenance by the unusual condition of the hair. (Photograph by Martin.)
 3 and 4. Front and side views of Negrito boy of Cagayan Province. (Photograph by Martin.)
 5 and 6. Front and profile views of full-blood Negrito man of Zambales Province showing beard on chin.
 7 and 8. Front and side views of Negrito man of Zambales Province.

PLATE XI. MODIFIED TRUE NEGRITO EARS.

- FIGS. 1 and 2. Front and side views of Negrito man of Zambales Province, of pure blood. (Photograph by Diamond.)
 3 and 4. Front and side views of Negrito man of mixed blood of Zambales Province. (Photograph by Diamond.)
 5 and 6. Front and side views of Negrito man of Zambales Province showing hair on chin. This man has lost an eye. (Photograph by Diamond.)
 7. Front view of head of Negrito man of Zambales Province.
 8. Side view of head of Negrito man of Zambales Province.

PLATE XII. COMBINATIONS OF TYPES.

- FIG. 1. A bright, native school teacher of Santa Domingo de Basco, Batanes Islands. Not a Negrito. Typical Iberian cara. (Photograph by Martin.)
2. Negrito woman of mixed type, Zambales Province. Primitive.
- 3 and 4. Man of Mount Isarog, Ambos Camarines Province. Shows his Negrito blood. (Photograph by Miller.)
- 5 and 6. Front and side views of Negrito man of Zambales Province, of pure blood.
- 7 and 8. Front and side views of Negrito of Zambales Province, known to his fellows as the "Captain-General" of the mountains.

PLATE XIII. MARIVELES NEGRITOS.

- FIG. 1. Full length view of typical Negrito man of Bataan Province. (Photograph by Worcester.)
2. Negrito of Bataan Province, the tallest Negrito I have ever seen. It will be noted that his remarkable height is due to extraordinarily long legs. (Photograph by Worcester.)
3. Full length view of typical Negrito man of Bataan Province. (Photograph by Worcester.)
4. Chief of the Mariveles tribe, Negrito of Bataan Province. See Plate IV, figs. 3 and 4. (Photograph by Worcester.)
5. Typical Negrito man of Bataan Province. (Photograph by Worcester.)
6. Full-grown Negrito man of Bataan Province. See Plate I, figs. 1 and 2. (Photograph by Worcester.)

PLATE XIV. LONG-AND SHORT-LEGGED NEGRITOS.

- FIG. 1. Negrito man in front of his hut near Batohaluni, Ambos Camarines Province. (Photograph by Miller.)
2. A young Negrito of Bataan Province, at his prime with bow and arrow, and bear bristle ornaments on his legs. (Photograph by Worcester.)
- 3 and 4. Batak man (Type 3), his wife (Type 6) and child, Tinitian, Palawan Island. (Photograph by Worcester.)
5. A Negrito of Zambales Province, of mixed blood.
6. A Negrito of Zambales Province, of full blood. Note relative size of figs. 5 and 6.

PLATE XV. LONG-AND SHORT-LEGGED NEGRITOS.

- FIG. 1. A Negrito, standing, of Cagayan Province. (Photograph by Martin.)
2. Typical full-blood Negrito man, of Zambales Province. (Photograph by Diamond.)
3. A Negrito man of Isabela Province, at his prime. (Photograph by Worcester.)
4. A Negrito sub-chief of Isabela Province. (Photograph by Worcester.)
5. A Negrito boy of Cagayan Province. (Photograph by Martin.)

PLATE XVI. NEGRITOS WITH INTERMEDIATE LEG-LENGTH.

- FIG. 1. Negrito man near Batohaluni, Ambos Camarines Province. (Photograph by Miller.)
2. A young Batak man (Type 2) of Timbog, Palawan Island. (Photograph by Worcester.)

FIG. 3. Negrito man of Cagayan Province. See Plate X, figs. 1 and 2. (Photograph by Martin.)

4. A young Batak man (Type 1), of Tinsag, Palawan Island. Note the typical hair-cut. (Photograph by Worcester.)

5. A Negrito man near Batobalani, Ambos Camarines Province. (Photograph by Miller.)

PLATE XVII. GROUPS OF ZAMBALAN NEGRITOS.

FIG. 1. A group of five Negrito men of Zambales Province, of mixed blood; indeed, the man at the left seems to have no Negrito blood at all and the man at the right has very little. (Photograph by Diamond.)

2. A group of Negrito men, of Zambales Province, mostly old and infirm types. Note rattan tied around their legs below the knees as a cure for rheumatism.

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FIG. 1.



FIG. 2.



FIG. 3.

PLATE A



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.



FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.



FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.

PLATE IV.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

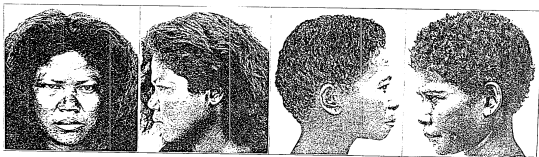


FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

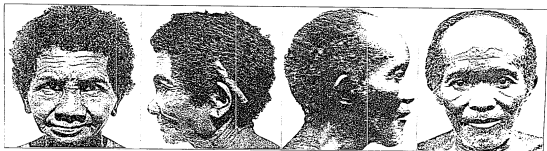


FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

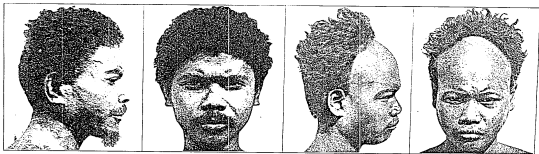


FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.

PLATE VII.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

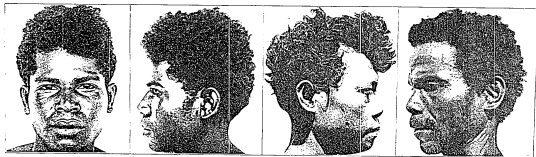


FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

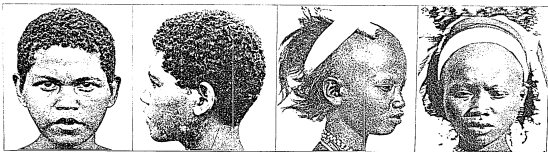


FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

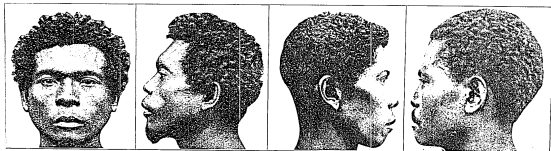


FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.

PLATE XIV.

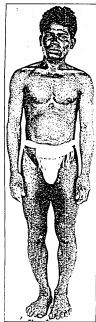


FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.

PLATE XV.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.

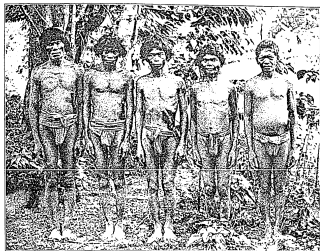


FIG. 1.

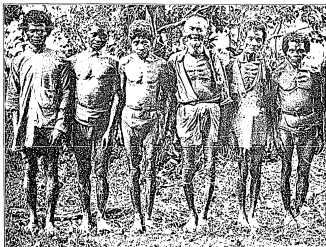


FIG. 2.