



The Aborigines of Hispaniola.

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DISCUSSION.

Mr. G. BERTIN said that he was sorry not to be able to agree with Dr. Hamy, but he considered that the monument was not intended to be viewed from the top, but from the sides; and it seemed rather to represent an artificial mound, with two semi-circular roads leading to the summit where stood the temple. If viewed from the top the design might be compared as well with the Egyptian uræus or the Indian pramantha as with the Chinese symbol.

Miss A. W. BUCKLAND remarked that although the sculptures on the Copan stone bear a strong resemblance to the curious engraved shells from American mounds, which she brought to the notice of the Institute last session, and which she believed to be traceable to Japan through the islands of the Pacific,—the resemblance consisting in the central disk, the waved lines proceeding from it, and the outer bosses; yet the division into two parts, instead of three, as in the shells and the Japanese drum, would seem to denote a different symbolism, and she failed to see in them the strong resemblance to the Chinese figure noticed by Dr. Hamy.

The following paper was then read by the Secretary:

The ABORIGINES of HISPANIOLA.

By HY. LING ROTH.

Introduction.

THE number of works from which to draw the materials of an account of the Aborigines of Hayti may almost be counted on one's finger ends. We have first of all Christopher Columbus's account of his Discovery of the West Indies, published under the title of "Select Letters of C. Columbus," by Mr. Major, 2nd ed., Hakluyt Society, 1870. In this edition is published Dr. Chanca's description of the events which occurred on the Second Voyage of Columbus. This account is supplemented by Ferd. Columbus's history, in Churchill's "Collection of Voyages" (Vol. II, 1704, pp. 557, &c., fol.) This includes (pp. 622–623) an interesting, if mixed, account of the superstitions, medicine men, and mythology of the aborigines by Ramon Pane, a Franciscan monk, who was engaged endeavouring to convert the Indians, and who was afterwards asked to describe their customs. All these men are of course, to be accepted as unanswerable authorities. One of the earliest published accounts of Columbus's Second Voyage was written by Nicolo Scillacio, and appeared in 1494 or 1495. This narrative is almost wholly derived from the letters of Guillermo Coma, and may be accepted as of historical value. In this paper has been used the Rev. John Mulligan's transla-

tion, which was brought out in New York in 1859. We then come to Angleria, more commonly known as Peter Martyr, a great collector of facts, and one who, from his position as a member of the Tribunal of the Indies, had every means of receiving the most authentic information. Indeed, he informs us that every one who returned from the "Ocean" came to him; it was chiefly due to this fact that he was so able to record the descriptions and histories he has handed down to us. Muñoz criticizes him somewhat severely; but in so far as we are able to judge, the restrictions refer more especially to portions of the Decades which do not concern us in our present inquiry. Angleria published his first Decade in 1511, and we have drawn our notes from "Hakluyt's Collection, &c.," Vol. V, 1812, pp. 168, 177, &c., &c., and also pp. 289–303. This latter portion¹ forms, as Angleria mentions, the sum total of the accounts he received from Andreas Moralis and others. Moralis was apparently a very trustworthy man, who was sent by the Governor Ovando to explore the interior of the island shortly after its discovery. He appears also to have been a very shrewd observer. The next author is Oviedo, or more properly, Fernandez de Oviedo y Valdez. He published his "Natural History of the Indies" in 1526 (Toledo, fol.), and a second edition in 1535 (Seville, fol.). We have made use of the French edition published at Paris in 1556. Oviedo's work forms the basis of nearly all the historians who followed him, and Thomas Jefferys, the geographer, in his "Natural and Civil History, &c." London, 1760, Part II, pp. 7–17, gives a very fair account of the natives of Hispaniola, taken almost wholly from Oviedo. Although Oviedo did not write till 1525, yet from a statement he makes (French ed., fol. 70) he must have been at St. Domingo probably soon after 1505, or after Moralis explored it. Girolamo Benzoni, with whom we have next to deal, did not visit the New World until about 1541, he spent fourteen years there, and published his book in 1565; we have drawn from the translation by Rear-Admiral W. H. Smyth, published in 1857 by the Hakluyt Society. At the time of Benzoni's visit the native Haytians were reduced to under 4,000, if we may credit Jefferys (Part II, p. 17). This would detract from the value of Benzoni's statements were it not for the fact that on account of his poverty he was obliged to mix with the Indians almost on terms of equality—he was so destitute that he had to make his own cassava bread—and that he traversed some of the most unknown parts of the island; being also an illiterate man, we judge, as well by internal and other evidence, that the informa-

¹ Third Decade, 7th to 9th chaps. inclusive.

tion he gathered was practically obtained. Very different, however, is the case with Le Pers. Charlevoix, who published Le Pers' account under the title of "*Hist. de l'Isle Espagnole*," 2 vols., 4to, Paris, 1730, says he obtained the MS., as well as permission to publish it, from the author; but M. Margry says that Le Pers repudiated Charlevoix's publication. However this may be, Le Pers, according to a statement in the preface, appears not to have gone to Hispaniola until about or after 1700. According to Jefferys there were at that date only 100 aborigines living, and according to the same preface Le Pers was chiefly if not wholly employed in converting the African slaves. A comparison of his account of the Indians with that given by Oviedo tends to the conclusion that he abstracted all he knew on the subject from that historian. Finally we have those princes among historians, Herrera-Tordesillas and J. B. Muñoz, who both had access to numerous documents not to be met with out of Spain. We have made use of the English editions of these works: Herrera's in 5 vols., 8vo., 1725-6, and Muñoz's, 1 vol., 8vo, 1797, both published in London.

There are other works to the contents of which we have not been able to gain access.¹

Constitution.

With regard to the appearance of the natives of this island, the authorities differ rather more than was to have been expected of eye-witnesses.

Hair.—The hair was flowing (Major, p. 13). Scillacio says their hair is black, soft, and hangs straight down (*op. cit.*, p. 87), and Oviedo (fol. 39) that the women had beautiful hair, soft and very black. The men were beardless (Chanca, p. 37, Herr., I, 62, Oviedo, fol. 39), save a few straggling hairs (Scill., p. 87). Their nostrils were very wide (Oviedo, fol. 39, Herr., I, 62). "Their foreheads, smooth and high, disagreeable, and they made them so at their birth, reckoning it graceful; for which reason, and because they always went bareheaded, their skulls were so hard that sometimes a Spanish sword would break upon their heads" (Herr., I, 62, also Oviedo, fol. 39). Scillacio (p. 87) says their heads are depressed, their foreheads high; and Ferdinand Columbus (Church., II, 586) speaks of the extraordinary high foreheads of the Watling Islanders.

While Oviedo (fol. 39) says their eyes were bloodshot (troubled), Scillacio, who speaks at second hand, describes them as grey with spots of various colours round them. So with

¹ The Royal Geographical Society has in the press a Bibliography and Cartography of Hispaniola by the present writer.

regard to their teeth, Oviedo (fol. 39) says they were very bad, and Scillacio (p. 87) says they were as white as ivory.

Their bodies were well made and proportioned (Major, pp. 6 and 13, Oviedo, fol. 39, Angl., p. 170), strong-boned and gross (Herr., I, 62). They had elegant well-polished nails (Scill., p. 87.)

As to colour, Columbus states they were not black as in Guinea (Major, p. 13), while Angleria (*op. cit.*, p. 190), says the women were of a lovely brown. They were whiter, of better countenance, and better shaped than the natives of the other islands (Herr., I, 62 and 67).

Character.

These people were very different on the north-west coast to what they were in other parts of the island. Columbus first landed on the north-west coast, and on his approach the natives fled, as they were timid to a surprising degree (Major, p. 6), but being called to by the Watling Islanders that the Spaniards were friends, and come from heaven (Major, p. 9), the natives flocked around to trade quickly enough. In the centre of the island, at Cibao, the natives likewise fled on the arrival of the whites (Church., II, 612). Columbus says of them here (*ibid.*, p. 7) that they were guileless, liberal, and exhibited much loving-kindness. Apparently, on all other parts where the Spaniards landed or attempted to land, while the natives appear to have been ever ready to trade, they first of all resented the approach of the Christians. Thus on the north-east coast at Ciguayos the natives showed fight (Church., II, 526), and at the south-east corner, probably Cuayacoa, they likewise were prepared for war (*ibid.*, II, 618). It would seem indeed that the whole territory of Ciguayos was devastated before the people were conquered (Angl., pp. 200–202). When the natives found they could not withstand the Spaniards in the open they continued to attack them when off their guard (Herr., I, 182), and during the revolt at Higüey the Indians, after repeated defeats rallied at every town (Herr., I, 297–301). The last cacique, “Harry,” was never subdued, and the Spaniards were ultimately obliged to come to terms with him (Herr., IV, 223). The natives of Porto Rico, who suffered much from the raids of the Caribs, were also brave people (Herr., I, 329, 338, 377). The Jamaicans also showed fight (Church., II, 615). Some of the Indians who escaped from Hispaniola went over to Cuba, and when the Spaniards arrived there they attacked them again (*ibid.*, I, 363–4).

When the wretched natives could no longer withstand the hateful work imposed upon them they fled to mountains and

woods and lived on wild fruits (Angl., p. 215), others killed their children and hanged themselves, and the women dissipated their pregnancy with the juice of a certain herb. "Some threw themselves from high cliffs, down precipices; others jumped into the sea; others into rivers; and others starved themselves to death. Sometimes they killed themselves with their flint knives; others pierced their bosoms or their sides with pointed stakes" (Benzoni, p. 78). Oviedo (fol. 41) also states that the unhappy wretches poisoned and hanged themselves; and Moralis (p. 296) that the women destroyed conception.

The caciques seem to have had good chivalrous notions. When Guarionexus fled to the court of Maiobanexus, the latter preferred to have his country laid waste than to give up his friend to the Spaniards.

Columbus speaks of the intelligence of these people, and expresses his astonishment at the good account they could give of their surroundings (Major, p. 8). They were apt imitators, copying the Christians like monkeys (Benzoni, p. 23, and Chanca, p. 65). Judging by an example in the British Museum of a beautiful stone axe copied from an European model, Scillacio's statement (*op. cit.*, p. 85) that they can copy anything shown to them is well worthy of credence.

On one occasion an Indian messenger showed considerable acumen in getting out of the clutches of his hostile countrymen; he pretended to deafness, dumbness, and lameness, and by signs made them believe he was trying to get back to his country (Herr., I, 172).

If the historians are not using a figure of speech only, the Indians must have been very emotional. When Columbus lost his caravel, *Guacamari* and his followers wept (Church., II, 594), the same cacique also wept every time he spoke of Columbus' murdered companions (*ibid.*, 620). In Jamaica the people could also "cry and sob" (*ibid.*, 616).

The inhabitants of all the islands appear to have been most hospitable (Church., II, 612, 618, and Scill., p. 77).

The bad character given to the natives by Oviedo (fols. 39, 57, and 59) can only be explained by the light—or rather darkness—of his bigotry. Because they were idolators, he failed to see that they had even one redeeming virtue.¹

History.

Past events were kept fresh in the memory of the people by ballads called *areitos* (Andr. Mor., 289) which were sung at feasts

¹ When relating statements by Oviedo and others that the natives of Hispaniola were lazy, we must remember that travellers are only too ready to attribute idleness to savages; but Mr. Im Thurn ("Among the Indians of Guiana," p. 269) has put this question of the indolence of savages in its proper light.

by the chiefs and priests. They used to draw on the walls of the caves where they worshipped (Pane, p. 625), but whether this was intended to record events we are not informed. According to Pane, the people who first inhabited the island came out of a cave,¹ called *Cacibagiagua*, in the mountain *Canta*. Some of the men who emerged were caught by the sun and transformed into stones, birds, trees, &c. Once a chief, *Guagugiana*, sent out a man *Giadruvava* to gather a certain herb, called *digo*, to wash him, but this man was turned into a nightingale, called *Giahuba Bagiaci*. Then the chief getting angry proposed to abandon the cavern. They forsook the children, who for want of nourishment remained dwarfs, and went to *Matinio* (Martinique) where the men abandoned the women and returned to the island. The men being without women, naturally desired them. One day some neuter human beings were discovered sliding down the trees, these beings were caught with much difficulty, woodpeckers were then tied to certain parts of their bodies who pecked holes into them, and thus they became women. Their migration is to a certain extent confirmed by *Moralis* (p. 289), who says the natives came in their canoes from *Martinino* (Martinique), on account of their quarrels there. He says the island was first named *Quizqueia*, and then *Haiti*. *Quizqueia* means a great thing, so great that none may be greater, also large, universal, or all. *Haiti* means rough, sharp or craggy, and this name was given on account of the mountainous character of the island (*ibid.*). He also states (p. 298) that in the mountains of the extreme western end there were said to exist wild men, without fixed abode, without certain language, and without cultivating the ground. *Oviedo* (*op. cit.*, fol. 51) also refers to these people who lived in caverns, and were not subdued until 1504.

Pane says (*op. cit.*, p. 625) that the Indians called the island *Aiti*, and apparently themselves the same, and that other islanders called them *Bouchi*. [*See* p. 279.]

Archæology.

Schomburgk, when travelling in the island, came across, at San Juan de Maguana, a curious stone circle, which he describes as follows:—

“The circle consists mostly of granite rocks, which prove by their smoothness [? worn by rain] that they have been collected on the banks of a river, probably at the Maguana, although its distance is considerable. The rocks are mostly each from 30–50 lbs. in weight, and have been placed closely together,

¹ Captain T. H. Lewin (“Hill Tribes of S.E. India,” Lond., 1870, p. 238) says that the Khyengs believe that their ancestors came out of a cave in the earth.

giving the ring the appearance of a paved road 21 feet in breadth, and as far as the trees and bushes, which had grown from between the rocks, permitted me to ascertain 2,270 feet in circumference. A large granite rock 5 feet 7 inches in length, ending in obtuse points, lies nearly in the middle of the circle, partly imbedded in the ground. . . . It has been smoothed and fashioned by human hands; and although the surface has suffered from the atmospheric influence . . . the cavities of the eyes and mouth are still visible." He compares the figure with that mentioned by Charlevoix, and says that "a pathway of the same width as the ring extends from it firstly due west and turns afterwards at a right angle to the north, ending at a small brook" (*Journ. Ethnol. Soc.*, 1854, Vol. III, p. 121). His supposition as to the figure being an idol is quite guesswork.¹

Astronomy.

On this point the historians tell us nothing. But we have a sort of side reference which would seem to imply that the aborigines did not take much account of astronomy. Ferd. Columbus, in speaking of the Guadalupe Islanders, says: "For in other places they only reckon the day by the sun, and the night by the moon, whereas these women reckoned by other stars, saying when the Charles Wain rises, or such a star is north, then it is time to do so and so" (*Church.*, II, 635).

Arithmetic.

Regarding their powers of calculation, we have only the one record of Pane, who states that they cannot count beyond ten (p. 622).

Medicine.

Several of the writers state that the Spaniards suffered much from venereal disease, communicated to them by the Indians, but modern research appears to decide that this disease was known to Europe before the discovery of America.

Benzoni gives a very short account of the customs observed by the priests or doctors in sick cases, but in that he confirms Pane's descriptions. He adds that these medicine men have great authority, but that they generally doctor only the principal people (*op. cit.*, pp. 81-82). He also appears to infer that the smoke inhaled was tobacco smoke.

¹ In his interesting work on British Guiana, Mr. C. Barrington Brown describes (p. 144) a somewhat similar but smaller stone circle. The slabs forming it are undressed, 2 to 3 feet high, and 5 to 6 feet apart; the circle is a true one, 30 feet in diameter. On one slab a frog-like figure has been cut in very deeply. The Peruvians built stone circles, see *Atlas to Humboldt and Bonpland's Voyage*, Paris, 1810, fol., p. 107.

Pane gives us a very full account, which runs as follows (pp. 626, &c.) :—

“When a man is sick they bring him the *Buhuitihu*, that is, as we said before, the physician. The doctor is obliged to be dieted as the sick man is, and to look like him, which is done thus :—He has to purge himself as the sick man does, which is done by snuffing a certain powder called *cohoba* up his nose which makes him so drunk that he knows not what he does, and so says many extravagant things which they affirm is talking with the *Cemis*, and that they tell them how the sickness came.

“When they go to visit any sick body, before they set out from their house they take the soot off a pot or pounded charcoal, and black all their face, to make the sick man believe what they please concerning his distemper. Then they take some small bones and a little flesh, and wrapping them all up in something that they may not drop, put them in their mouth, the sick man being before purged with the powder aforesaid. When the physician is come into the sick man’s house he sits down and all persons are silent ; and if there are any children they put them out, that they may not hinder the *Buhuitihu* in performing his office ; nor does there remain in the house any but one or two of the chief persons. Being thus by themselves they take some of the herb *Gioia*,” &c., which will cause them “to vomit what they have eaten, that it may not hurt them ; then presently begin their song, and, lighting a torch, take the juice. This done, having stayed a little, the *Buhuitihu* rises up, and goes towards the sick man, who sits all alone in the middle of the house, as has been said, and turns him twice about, as he thinks fit ; then stands before him, takes him by the legs, feels his thighs, descending by degrees to his feet, then draws hard, as if he would pull something off ; then he goes to the door, shuts it, and says, ‘Begone to the mountain or to the sea, or whither thou wilt ;’ and giving a blast as if he blowed something away, turns about, claps his hands together, shuts his mouth, his hands quake as if he were a-cold, he blows on his hands, and then draws in his blast as if sucking the marrow of a bone, sucks the man’s neck, stomach, shoulders, jaws, breast, belly, and several other parts of his body. This done, they begin to cough and make faces, as if they had eaten some bitter thing, and the doctor pulls out that we said he put into his mouth at home or by the way, whether stone, flesh, or bone, as above. If it is anything eatable, he says to the sick man, take notice you have eaten something that has caused this distemper, see how I have taken it out of your body, for your *Cemi* had put it into you because you did not pray to him or build him some temple, or give him some of your

goods.¹ If it be a stone, he says, keep it safe. Sometimes they take it for certain that those stones are good and help women in labour, wherefore they keep them very carefully wrapped up in cotton, putting them into little baskets,² giving them such as they themselves eat, and the same they do to the *Cemis* they have in their houses. Upon any solemn day, when they provide much to eat, whether fish, flesh, or any other thing, they put it all into the house of the *Cemis* that the idol may feed on it."

If the patient dies, and has many friends, or was a lord of a territory, and can oppose the physician, for mean people dare not contend with him, they take the juice of the leaf of an herb called *Gucio*, and mix it with the dead man's nails and forehead hair pounded between two stones and "pour it down the dead man's throat and nostrils, and so doing, ask him whether the physician was the cause of his death, and whether he observed order. This they ask several times, till he speaks as plain as if he were alive, so that he answers to all they ask of him; . . . and they say the physician asks him whether he is alive, and how he comes to answer so plain; and he answers he is dead. When they have known what they desire of him, they return him to his grave, whence they took him to make this inquiry." They have another method to make the dead speak, by placing the body on a very hot fire covered with earth, but in this case the dead only answers ten questions. If the *Buhuitihu* has not done his duty the friends waylay him, and break all the bones in his body, and leave him for dead. "At night they say come abundance of snakes of several sorts," who, licking the physician's face and body, he recovers in a few days, and then tells the people that the *Cemis* came to his assistance. The deceased's friends "if they can catch him again they put out his eyes, and bruise his testicles; for they say none of these physicians can die, though never so much bastinadoed, if they do not cut out his testicles." In the other case when they uncover the fire, if the physician did not do his duty, the smoke after rising enters the physician's house, he himself gets sick, and his skin becomes diseased; these are considered signs that he did not do his duty, and the friends of the dead man then try to kill him.³

¹ The medicine men among the Abipones used similarly to hide thorns, worms, beetles, &c., in their mouths, and then pretended that these had been sucked by them out of the patient's body (Dobrizhoffer, "Gesch. der Abip.," Vienna, 1783, II, p. 326). Im Thurn ("Among the Indians of Guiana," p. 338) had a caterpillar taken out of his body by a *peaiman* (medicine-man).

² Im Thurn points out ("Among the Indians of Guiana," p. 423) that the Guiana Indians carry about certain worn stones, to which some superstitious value is attached.

³ The Payaguas occasionally sacrificed their medicine men when the latter were not successful with their patients (Dobrizhoffer, "Gesch. der Abip.," Vienna, 1783, II, p. 327).

Food.

They were apparently omnivorous. They devoured the small mammalia¹ indigenous to the island. The Indians generally eat great spiders, worms that breed in rotten wood,² and fish almost raw,³ for as soon as taken, before they roast it, they dig out the eyes to eat (Church., II, 590). Dr. Chanca also says they "eat all the snakes and lizards and spiders and worms they find upon the ground" (*op. cit.*, p. 68), "and such birds as they can catch of many kinds which abound in the island" (*ibid.*). They eat serpents "like unto crocodiles, saving in bigness," called Iuannas. This animal was evidently prepared with much care, being cleaned and washed, then rolled up and placed in a pot just big enough to hold it, a little water was added, and it was then boiled over a soft fire of sweet wood which gave little smoke. Of the fat "an exceeding pleasant broth or pottage" was made, and the eggs were boiled alone, (Angl., p. 192). There were not many lizards "for the Indians consider them as great a luxury as we do pheasants" (Chanca, *op. cit.*, p. 43). The Cubans also eat oysters (Church., II, 615).

But Benzoni gives us the best account of the mainstay of these natives, which was bread made from maize and from the roots we call cassava. His account of the preparation of the bread from maize is as follows: "The women, *molandare*, who grind it, wet a quantity of this grain the previous evening with cold water, and in the morning they gradually triturate it between two stones. Some stand up to it, others kneel on the ground; nor do they care if any hairs fall into it, or even some *pidocchi*. When they have made a mass by sprinkling in water with the hand, they shape it into little loaves, either long or round, and putting them into some leaves of reeds, with as little water as possible, they cook them. This is the common people's bread; it lasts two days and then mildews. The chiefs' bread is made in the following way: after soaking and triturating the corn between two stones, the *molandare* wash it with hot water and pick out the husk, leaving only the flour, which they grind as much as they can and then shape into small cakes. These are cooked in a round pipkin, applying fire under them by

¹ According to Wallace there are only two genera, the *Solenodon* and the *Capromys*. He calls the latter *hutias* and the former *agouta*. The Spanish historians speak of *utias* only and describe them as animals of about the size of rabbits.

² Cf. Im Thurn, who gives (p. 266) a whole list of insects eaten by the Guiana Indians.

³ The Tongans eat fish raw (A. St. Johnston, "Camping among Cannibals," Lond., 1883, p. 53.)

degrees." Benzoni goes on to tell us from his own experience that the "grinding is very severe work," and that although the chiefs' bread takes great trouble in making, it is only good when fresh and cold. In the woodcut with which he illustrates his method of making bread, two women are kneeling over the fire evidently baking, and the third woman, also kneeling, is evidently grinding the maize on a curved piece of stone or wood, having three or four legs, and known as a *metatl*, by means of an instrument which looks like a rolling pin.¹

The *cazabi* bread, according to Benzoni, is made thus: they take up fresh roots, "they peel them and cut them with sharp stones that they find on the beach, and putting them into a rag, they squeeze out the juice, which would be poison to anyone drinking it; then laying them on a great brick, like cakes of paste, they cook them on the fire, leaving them so long as they will hold together. Finally they put them into the sun to dry. They make some thick and some thin."² This, to my taste, is a wretched article of food, but if put into a dry place it would continue good for three or four years. The accompaniment of some moisture in the throat is requisite, else it is harsh and difficult to swallow."

The two other sorts of roots *battatta* and *haie* "are commonly cooked in the embers" (Benzoni, p. 86).

They had also a spice called *agi* (Chanca, p. 68) which they drank in water (Herr., I, p. 68).

Their *chichia* or what we should call *kava*, is made, according to Benzoni (p. 86), by the women, who grind the maize, then put it "into water in some large jars"; a little of the grain is rendered "somewhat tender in a pipkin," and then handed over to other women who chew it, spit it out "upon a leaf or platter and throw it into the vase with the other mixture. . . . It is then boiled for three or four hours, after which it is taken off the fire and left to cool, when it is poured through a cloth, and is esteemed good in proportion as it intoxicates. . . . They

¹ This method of reducing grain which at the time of the discovery was common throughout America, differs entirely from that followed in the Old World (see Stevens' "Flint Chips," p. 234). Strange to say, Baker found the American method in use at Cassala, thus ("Nile Tributaries of Abyssinia," Lond., 1867, pp. 78-79): "There are no circular hand-mills as among Oriental nations, but the corn is ground upon a simple flat stone, of either gneiss or granite, about 2 feet in length by 14 inches wide. The face of this is roughed by beating with a sharp-pointed piece of harder stone, such as quartz or hornblende, and the grain is reduced to flour by great labour and repeated grinding or rubbing with a stone rolling pin."

² This account of the bread-making should be compared with that given by Im Thurn (pp. 260-263) of the bread-making of the Guiana Indians, who likewise make several kinds of bread.

also make wines of other kinds, of honey, of fruits, and of roots, but these do not intoxicate as the first does.”¹

Oviedo mentions many varieties of fruits, but it is not clear whether he refers to those of the island or of the mainland.

Narcotics.

We have already seen (*Medicine*) that these aborigines had a powder, *cohoba*, the smoke of which they inhaled through their noses. We are probably not wrong in inferring that this powder was a preparation of the herb known to us as tobacco.

According to Jefferys (*op. cit.*, II, 11) the moist leaves of tobacco were spread on half-kindled coals, but Oviedo (*op. cit.*, fol. 71) simply says they make themselves drunk with the smoke of a certain herb like henbane. He describes the smoking through the nose, thus: “The instrument with which they inhaled the smoke was a forked hollow tube about a palm in length, and of the thickness of a little finger, well polished, well made, all of one piece. They inhaled the smoke as long as they could, in fact until they fell down drunk. Those who could not afford such tubes made use of reeds.” Oviedo gives a drawing of this tube, and a very similar tube from Mexico exists in the anthropological collection in the British Museum. Oviedo calls special attention to the fact that the tubes or reeds are called *tobacco*, and not the plant smoked. Occasionally when a chief fell drunk as above, his women carried him away, but this was only when they had received special instructions to that effect beforehand.

It is remarkable that none of the travellers mention the smoking of pipes, or bowls. Benzoni says that *tobacco* was the Mexican name of the herb, and in describing the medicinal customs referred to, he does not give the tube any particular name. But if the aborigines did not smoke pipes they at least smoked cigars. The following is Benzoni’s account of cigar-smoking (*op. cit.*, pp. 80–81):—

“When these leaves are in season, they pick them, tie them up in bundles, and suspend them near their fire-place till they are very dry; and when they wish to use them they take a leaf of their grain (maize) and putting one of the others into it, they roll them round tight together;² then they set fire to one end,

¹ On the Mosquito coast (H. A. Wickham, “Rough Notes,” Lond., 1872, p. 189, and John Collinson, “The Indians of the Mosquito Territory,” in *Memoirs of the Anthropol. Soc.*, III, 1870, p. 151) to this day at the *Mishla* feasts the drink (*mishla*) is prepared in the same way by chewing, &c. Compare the manufacture of the *chichia* with the preparation of the *chicha niascada* by the Sierra Indians of Peru, as described by Tschudi (“Peru,” 1846, II, p. 179) and Im Thurn’s description of the *paiwari* (pp. 263–264).

² Cf. Im Thurn (p. 318), cigarette-smoking.

and putting the other end into the mouth they draw their breath up through it, wherefore the smoke goes into the mouth, the throat, the head, and they retain it as long as they can, for they find a pleasure in it, and so much do they fill themselves with this cruel smoke that they lose their reason. And some there are who take so much of it, that they fall down as if they were dead, and remain the greater part of the day or night stupified."

We have seen under the headings of *Religion* and *Medicine* that tobacco was also taken in some form or other in order to produce vomiting, delirium, and general relaxation of the muscles and purging. From these results it would appear that tobacco was not merely inhaled or taken as snuff but also taken internally,¹ or that it was mixed with some other narcotic.

Crimes and Morals.

"Some say that these people were very great thieves, and that for every little fault their laws inflicted hanging." So says Benzoni. He believed they were honest; he expresses a wish that all Christians were equally so, and considered that the thieving must have been learned from the Spaniards. He is strengthened in his belief of the honesty of the Indians by imagining that until the Spaniards arrived they had nothing of value to steal from one another, forgetting that whatever they did possess was of value to the holder, and that although eatables, gold in the river beds, &c., were common to all, there was other property which could be stolen. But Columbus distinctly says (Church., II, 621) that the caciques used to steal one another's *cemís*; and Oviedo states that thieves were spitted on the branch of a tree and left to die (*op. cit.*, fol. 75), and that no one dared to intercede for them. The Watling Islanders on the contrary laid their hands on everything they possibly could (Church., II, 586).

Benzoni says in these countries there is very little chastity; and in few places are the girls or sisters attended to. They all sleep together like fowls (*op. cit.*, p. 82). At the time of Benzoni's visit the Indians were already greatly demoralised, and while allowing that chastity is not a savage virtue, we must remember that the destruction of Columbus' first colony was in a great measure attributed to the interference of the Spaniards with the native women (Chanca, p. 53). Oviedo states that some women were chaste and loved their husbands (*op. cit.*, fol. 72), and others most unchaste (fol. 74). He also states that *Guacanagari* had certain women with whom he com-

¹ Compare A. S. Taylor, "On Poisons," Lond., 1875, p. 803.

mitted the abominations, related by Pliny (Bk. X, ch. 62) [sic]; and that men who allowed themselves to be polluted were obliged to dress like the women,¹ and by whom they were hated (*op. cit.*, fol. 72). Incest (connection with mother, sister, or daughter) was unknown. When men went to gather gold they had to be continent (*op. cit.*, fol. 74).²

Religion.

Considering the general contempt with which the Spaniards treated the natives and their customs, we may congratulate ourselves on having comparatively fair accounts of the religion of these Indians. Columbus first of all says that "they are not acquainted with any kind of worship, and are not idolators;" and states that they believe he and his crew came from heaven (Major, p. 8), but later on he offers to ship as slaves "as many of these idolators as their Highnesses shall command" (*ibid.*, p. 15). Ferdinand Columbus' account of their worship is as follows: "Every cacique appears to have had a house apart from the town, in which there was "nothing at all but some wooden images carved by them, called *Cemis*, they repairing to perform certain ceremonies and pray there. In these houses they have a handsome round table, made like a dish, on which is some powder, which they lay on the head of the *Cemis*, with a certain ceremony; then through a cane that has two branches clapp'd to their nose, they snuff up this powder . . ." which "puts them besides themselves, as if they were drunk. They also give the image a name, and I believe it is their father's or grandfather's, or both, for they have more than one, and some above ten, all in memory of their forefathers . . ."³ The people and *caciques* boasted among themselves of having the best *cemis*, but objected to Christians entering these houses, and on occasions carried off the *cemis* and hid them in the woods; they appear nevertheless to steal each other's *cemis* (Church., II, 621). Some Spaniards one day having burst into one of these houses, and hearing the image speak, knocked it over, discovered a man concealed. The *caciques* were supposed to control their subjects by means of these *cemi*, as they begged the Spaniards not to let the people know of their discovery (*ibid.*). Herrera says that the image which the Spaniards overthrew was "hollow, and behind it was a hollow cane, like a trunk to shoot pellets,

¹ According to H. H. Bancroft ("Native Races of the Pacific," I, p. 585), among the New Mexicans such men were similarly obliged to dress like women.

² H. O. Forbes describes the solemn ceremonial which precedes the annual gold washing operations among the Bibicu tribes in Timor ("Naturalist's Wanderings," p. 467.)

³ Im Thurn (p. 366) says of the Guiana Indians "the supposed gods are really but the remembered dead of each tribe."

that reached to the corner of the house, which was garnished and covered with greens, where the person was hid who spoke what the cazique would have the *cemi* say" (*op. cit.*, I, p. 160).

Most of the *caciques* have also three stones which they were said to worship, one to help corn and all sorts of grain, a second which helps women to be delivered without pain, and a third which procures rain or fair weather according to requirement (Church., II, 621). See above, *Medicine*, the charm-stones.

According to Pane (Church., II, 622), they think there is an immortal Being, like heaven, invisible, and that has a mother, but no beginning, and this Being they call *Jocakwague Maorocon*, and its mother they call *Atabei*, *Iermaoguacar*, *Apito*, and *Zuimaco* . . . "Almost all these people have abundance of *cemis* of several sorts; some have their father, mother, kindred, and predecessors; some figures cut in stone and wood, and many of both sorts, some that speak, and others that cause things to grow, some that eat, others that cause rain, and others that make the wind blow" (*ibid.*, 626). They pay great veneration to a grotto called *Giorovava*, out of which the sun and moon came, in the country of the *Cacique Maucia Tiuvet*, and "have painted it all after their fashion, without any figure but leaves and the like." Here they had two little stone *cemis* called (*Boinaiel* and *Marvio*), about a quarter of a yard long, "their hands bound, and they looked as if they sweated." These images were much honoured when rain was wanted, (Pane, *ibid.*, 625). Oviedo (*op. cit.*, fol. 75) also tells us that they prayed to their images for rain and good seasons.

Pane continues (*ibid.*, 628), the wooden *Cemis* are made as follows:—A man travelling, sees a tree shake its roots, this action frightens him, he asks who he is, and the tree refers him to a physician. Then the physician hurries along and gives it *cogioba*, asks it why it sent for him, whether it will go with him, and have a house built and endowed. That tree thenceforth becomes a *Cemi*, and is cut into shape according to its own directions.¹ An important *Cemi*, *Faraguvaol* (Pane, *ibid.*, p. 630), was originally a certain creature that ran into a ditch and was found to be a beam which looked as though it had life in it.

The stone *Cemis* are of several sorts (Pane, *ibid.*, 629). Some the physicians take out of the bodies of those that are sick, and those are looked upon as the best to help women in labour.

¹ Compare this account of the making of a *Cemi* with the statement of Mr. Im Thurn at the Exhibition, 1886 ("On the Races of the West Indies," Journ. Anth. Inst., XVI, p. 195) that "at the present day the red men of the mainland are very apt when they see a piece of wood of curious natural form—suggesting, say, some animal—to take that wood, and, with more or less artistic touches, to complete its resemblance to that animal."

"Others there are that speak, which are shaped like a long turnip with the leaves long and extended, like the shrub bearing capers. Those leaves for the most part are like those of the elm. Others have three points and they think they cause the *Guica* to thrive . . ." The *cogioba* which they give to the *Cemi* is "to pray to it, to please it, to ask and know of the said *Cemi* what good or evil is to happen, and to beg wealth of it. When they would know whether they shall be victorious over their enemies, they go into a house, whither none but the chief men are admitted. The lord of them is the first that begins to make *cogioba* and to make a noise whilst he does it, none of the company speaking till he has done. His prayer being ended, he stands awhile with his head turned about and his arms on his knees; then he lifts up his head and looks toward heaven, and speaks. Then they all answer him with a loud voice, and when they have all spoken, giving thanks, he tells the vision he saw, being made drunk with *cogioba* he snuffed up his nose, which flies into his head, and says he has talked with the *Cemi* and shall obtain a victory, or that his enemies shall fly, or that there shall be a great mortality, or war, or famine, or some such thing, as occurs to him in his drunken fit" (Pane, *ibid.*, 629).

There are some funny stories told by Pane of these *Cemis*. *Baidrama*, in the time of the wars, was burnt, but being washed in *guica* juice "his arms grew out again, his body spread, and he recovered his eyes," but as his attendants did not give him *guica* to eat he made them ill. One *Cemi* named *Corocose* was fond of lying with the women. *Faraguvaol*, already mentioned, and *Opigielguowiran* were in the habit of running away. The former even ran away when bound in a sack. The latter had four legs like a dog, and when the Christians came he sought refuge in a morass, since which time he has not been heard of (Pane, *ibid.*, pp. 629-630).

They also had female *Cemis*. The *Cemi Guabancex* was a female made of stone. When she was angry she "raises the winds and waters, overthrows houses, and shakes trees." She had two female attendant *Cemis*, who carried out her orders (Pane, *ibid.*, 630).

Benzoni also gives us some interesting information on the worship of the Indians. On page 78 he says: "Touching the religion not only of this island, but also of all the other nations of the New World, they worshipped, and still worship, various deities, many painted, others sculptured, some formed of clay, others of wood, or gold, or silver; and in some places I have seen them made with a tail and feet, like our Satan." Oviedo says (fol. 69) "the variety of *Cemis* is too numerous to describe; they are made of gold, stone, wood, and earth." They were apparently

much attached to these *Cemis*, for when Chanca pretended to throw them on the fire they were much hurt (Major, pp. 65-66). He (Benzoni) states that in consequence of the priests destroying the idols, the natives hide them in caves and sacrifice "to them occultly." "They have (p. 79) a name for every one, regarding this as their patron on this subject, and that as their patron on that subject" But he says "these people only ask of their gods plenty to eat and drink, and good health, and victory over their enemies." He says the devil appears in various shapes and promises to fulfill their entreaties, and then does not do so, excusing himself on the ground "that he has changed his mind because they have committed some great sin."

"When the cacique of *La Española* wished to celebrate a feast in honour of his principal false deity, he commanded all his vassals, both men and women to come to him on a certain day, and on arrival at the appointed spot, they ranged themselves in order. The cacique then advanced and entered the temple, where the ministers were dressing the idol. There he sat down, playing on a drum, and all the other people followed; first the men painted black, red, and yellow, with plumes of parrot and other feathers, with ornaments of sea-shells round their necks, their legs, and their arms. The women were not painted at all; the girls were quite naked; the married women had a covering hanging from their waist. . . . Thus they entered the temple, dancing and singing certain of their songs in praise of their idol, while their chief saluted them with his drum. Then by putting a stick down their throats they vomited, so that the idol might see they had nothing bad either in their stomach or their breast. After performing these foolish ceremonies, they all sat down on their heels, and (p. 80), with a melancholy noise, they sang some more songs. Then some other women entered the temple with baskets adorned with roses and various flowers, and filled with bread, and they went round to all those who were singing and repeated a little prayer to them. The singers jumped up on their feet to answer, and when they had finished these songs, they began others to the honour and glory of their chief; after which they presented the bread to their idol. The ministers now took and blessed it, and shared it with all the people, as if it was a holy thing or good relic. Finally, every man, highly elated and content, returned to his own home.

" . . . they worshipped two wooden figures as the gods of abundance. And at some periods of the year many Indians went on a pilgrimage to them. They had also another idol made with four feet,¹ like a dog, and they believed that when he was

¹ This is probably *Opigielguowiran* mentioned above by Pane.

angry he went away to the mountains, where, being found, they used to bring him back on their shoulders to the temple."

After death they believe they go to a happy vale which, according to Ferd. Columbus' description (Church., II, 621) would resemble Mahomet's heaven; but according to Pane (*op. cit.*, pp., 625-6) the dead are said to go to a place called *Coaibai*, which lies in a part of the island called *Soraia*; the dead feed on fruit of the size of a quince, and for the rest, their life is one of bliss and sensual pleasures. They wander during the night and hence natives do not stir out at night for fear of meeting them. The Indians called the spirits of the dead *opia*, and those of the living *goeiz*. Perhaps we may hazard the conjecture that these names explain their dreams, for, according to the same authority, they say sometimes a man would fight with an *opia*, and then find he had got hold of a tree, and at other times he would think he was lying with a woman, and there was no one there. Since the Christians took their *Cemis* away, spirits no longer appear to them (Moralis, p. 290).

With regard to ceremonies carried on in grottoes Schomburgk (Journ. Ethnol. Soc., 1854, Vol. III, p. 121) describes charcoal and coloured drawings in the calcareous caves of Pommier, which he considers Indian work. Descourtilz also ("Voy. d'un Naturaliste," Paris, 1809, Vol. II, pp. 18-19) says rock carvings of grotesque figures are to be found in the caves of Dubeda, Gonaïves, in those of Mont Selle, near Port-au-Prince, and in the Quartier du Dondon, near Cap François (C. Haïtien).

It would appear that some of the historians accepted every carved figure, or drawing of a figure, as representing a god. Oviedo (fol. 69) thus speaks of the hideousness of one particular idol which they figure everywhere, and not only paint on one part of the house but also grave on the stools. A modern writer (W. Walton, "Present State of the Spanish Colonies," London, 1810, Vol. I, pp. 164-170) apparently falls into a similar error in describing what is apparently a meal pounder (or some allied instrument), and lays stress on the figure-head, which is of course only an ornament.

Superstitions.

They believed that the sun and moon came out of the grotto called *Giovorava*, in the country of the cacique *Maucia Tiuvél* (Pane, p. 625, Benzoni, p. 80). Their tradition of the making the sea runs thus:—There was a man name *Giaia*, who killed his son *Giaiael*, for attempting to kill him. The son's bones were put into a calabash, and after a time, when the father went to look at them, they were turned into fish, and he and his wife resolved

to eat them. In the meanwhile four brothers (born at one birth) came during Giaia's absence and eat the fish, and while so doing they perceived him returning, and so going about in that hurry to hang up the calabash, they did not hang it right, so that there ran so much water from it as overflowed all the country, and with it came abundance of fish, and hence they believe the sea had its original (*ibid.*, p. 624). Pane says these superstitions are reduced to song (*ibid.*, p. 626). Benzoni (*op. cit.*, p. 80) mentions a pumpkin kept as a relic, which had come out of the sea with all the fish in it. Pane also tells us of a tradition that a clad people should come and rule over them and kill them, and that they should die of hunger. This was originally considered to be the Caribs, who, however, only plundered and fled, and then they thought it must be some other people, and then they found it was the Spaniards that were meant (*ibid.*, p. 631). Benzoni tells the same story (*op. cit.*, p. 22), and adds that on the arrival of the Spaniards this tradition had evidently been forgotten. Moralis (*op. cit.*, p. 289) says this tradition was embodied in a song, and that they afterwards sang it with mourning.

Magic and Witchcraft.

Mr. Shepherd ("The Island of San Domingo," Hunt's Merchants' Mag., N. York, 1863, pp. 361-363) mentions an old parchment, in the possession of the Archbishop of Santo Domingo, which describes the trial of some Indians for "... invoking spirits by the aid of a liquid, distilled from a plant called Zamia, which also contained a fibre that the Indians made into a garment they wore to assist in the working of the charm derived from the liquor. Under the influence of this potation, and enveloped in a robe of Zamia, the queen of the tribe retired to a cavern near the sea coast, and consulted the spirits of her ancestors with regard to matters of state, each year at the vernal equinox, or new season of the Indians." This information is given for what it is worth.

Government.

"There were four principal kings or caciques to whom all the others were subject. The names of those four were *Caunabo*, *Guacanagari* (*Guacamari*), *Behechico*, and *Guarionex*; each of these had under him 70 or 80 other little lords; not that they paid tribute or gave anything, but were obliged whensoever called upon, to assist them in their wars and till the ground" (Church., II, 619). Herrera says there were five great sovereigns (*op. cit.*,

I, 67). The commands of these caciques were obeyed to the letter (Church., II, 592, and Herr., I, 64).

When *Guacanagari* came on board Columbus' vessel on the first voyage, he had with him two old men who spoke to and for him, and apparently he only spoke to his people through such men. A custom of this sort would serve to impress the populace with awe, and the frequent allusions to the extreme reverence the people paid their chiefs may be accepted as a tolerable proof of the unlimited power with which they controlled their subjects.

Women were evidently not debarred from government, for we have the case of *Anacaona*, the wife of King *Caunaboa*, who was also the sister of *Bohechico*, King of *Cibana*. Her husband was imprisoned by the Spaniards, and she succeeded to her brother's throne (Major, p. 233, and Angl., pp. 191-192).

"They leave the inheritance of their kingdoms to the eldest sons of their eldest sisters. If she fails, to the eldest of the second sister, and so of the third if the second fail. For they are out of doubt that those children come of their blood, but the children of their own wives, they count to be not legitimate. If there remain none of their sister's children, they leave the inheritance to their brothers, and if they fail, it descendeth to their own sons. Last of all, if all these fail, they leave it to the most worthy and powerful" (Moralis, p. 301). Oviedo (*op. cit.*, fol. 74) and Benzoni (*op. cit.*, p. 82) confirm this.¹

Customs.

The people howled when Guarionexius was taken captive (Angl., 191). When a king's son is born the natives of the neighbourhood repair to the queen's chamber and salute the child with high-sounding titles. Bechicus Anacacoa was also called *Tureigua Hobin*, meaning a king shining as bright as brass; *Starei*, bright; *Huibo*, highness; *Duiheynequen*, a rich flood. The king is always to be spoken of with the full number of his titles (Moralis, 300). At Cuba first the men then the women came to kiss the hands and feet of the Spaniards (Church., II, 589). The Indians of Hispaniola laid their hands on the Spaniards' heads by way of honour (Church., II, 592). When the Cacique *Guacanagari* and Columbus first met the former and his two men (counsellors), they neither ate nor drank the food offered, but touching the cups with their lips and tasting the food they passed it on to the mob who did eat and drink (Church., II, 593). They were all very grave and the two old men observed

¹ Cf. Im Thurn, p. 185, "Descent in the Female Line among the Arawaks."

the king's mouth and spoke for and to him (*ibid.*). *Guacanagari* had lots of attendants. His son went at some distance behind him (*ibid.*). The exchange of presents was evidently customary, for on first meeting Columbus received a girdle from *Guacanagari* (*ibid.*).

Property.

Columbus (Major, p. 13) tells us, "I have not been able to learn whether they have any property of their own. It seemed to me that what one possessed belonged to all, especially in the matter of eatables;" and Benzoni corroborates this saying (*op. cit.*, p. 83), "and as to eatables, everybody gives to whosoever goes to his house," and of gold and silver, he says they only had to go to "the mine and get as much as they liked, as people do at a spring of water;" but as we shall see (*Personal Ornaments*) gold was not held in a very high estimation by them.

On travelling to *Cibao* with Columbus, the Indians from Isabella "went into the houses, took what they liked best, and yet the owners were not at all displeased, as if all things were in common. In the like manner, the people of the country, coming near to any Christian, would take from him what they thought fit, thinking our things had been as common as theirs. But they were soon undeceived" (Church., II, 612).

Scillacio says, "All things are held in common" (*op. cit.*, p. 83). The other historians say nothing about the possession of property. It is doubtful whether this community of possession extended beyond the lower class, for we have seen that caciques possessed and stole *Cemis*, and that men were impaled for theft. [For distribution of property see *Government* and *Burials*.]

Trade.

Dr. Chanca (*op. cit.*, p. 64) says, "The Indians barter gold, provisions, and everything they bring with them for tags of laces, beads, and pins, and pieces of porringer, and dishes." It can hardly be supposed that they learnt to trade from the Spaniards, for Columbus distinctly says, when speaking of their canoes (Major, pp. 9-10), "they navigate among these islands, which are innumerable, and carry on their traffic."

Angleria (*op. cit.*, V, p. 178) also states that the *Cibanas* and their neighbours barter amongst themselves gold, spice, &c., for pots, dishes, stools, &c.; and Moralis (*op. cit.*, p. 290) refers to the selling by common people.

The Jamaicans, when Columbus visited them, after first offering to fight, "followed in their canoes to trade" (Church., II, 615).

War.

On the east coast the natives, when approaching to attack, "spake out loud with terrible voice" (Angl., p. 175), and would come on "with terrible cry" (*ibid.*, 199). These were the *Ciguaians* and *Caunaboa's* people. They daubed themselves previously to fighting. The latter on one occasion were ranged in battle array in five divisions (*ibid.*, 187). If the accounts are not exaggerated they would muster up to 6,000, 8,000, and 15,000 strong (*ibid.*, 191 and 199–200).

Columbus says (Major, p. 6) "their only arms are reeds cut in seeding time, to which they fasten small sharpened sticks;" but Chanca (*op. cit.*, p. 61) states that they had *cross-bows*, from which they discharged darts with considerable skill; he mentions also the finding of a man with a gaping wound in his shoulder, caused by a dart, so that he had been disabled from fleeing any further" (*ibid.*). We are also told that they possessed "bows and arrows, long and sharp like javelins, made hard at the ends with fire" (Angl., p. 175), and again "they fought with clubs, arrows tipped with bones, and spears made hard at the ends with fire" (*ibid.*, p. 187). Ferd. Columbus informs us that they had cudgels instead of swords, bows made of yew, almost as big as those of France or England, the arrows of small twigs growing out of the ends of canes, which are massive and very straight, about the length of a man's arm and a half; the arrow is made of a small stick hardened at the fire, about a quarter of a yard and a half long, at the end whereof they fix a fish's tooth or bone, and poison it (Church., II, 597); and later on he says again that poisoned arrows were used on the south coast (*ibid.*, II, 618). After the arrival of the Spaniards they fixed nails on as spear-heads (Herr., II, 190). Finally Oviedo (fol. 39) describes long hard wooden swords, two fingers thick, pointed at both ends, and with a guard and used like a two-handed battle-axe; he mentions also short sticks used as darts, the points of which split and break off, causing bad wounds. It is not clear, however, whether these two latter are Carib or Haytian weapons. Stones appear also to have been used (Herr., II, 190).¹

A curious light is shown on their method of fighting by the following description of an encounter recorded by Herrera (*op. cit.*, I, p. 300):—

"At *Higüey* an Indian challenged a Spaniard, the Indian only

¹ The use of stones as missiles is common among savages. The Australians are almost unerring shots, and so are the South Sea Islanders; according to H. O. Forbes ("Naturalist's Wanderings," pp. 242 and 462), the Kubus in Sumatra and the Bibuçuçu in Timor are wonderfully accurate marksmen with stones.

pointed his arrow, and shifted from side to side to avoid the stones, and to prevent the Spaniards coming close to make use of his weapons;" the Spaniard "darted his spear at him, thinking he had struck him through, but the Indian stepped aside, and went away scoffing at him."

Hunting and Fishing.

Beyond the bare mention of the fact that the natives brought fish, parrots, &c., to the Spaniards when they first landed (Muñoz, p. 220); that the natives hunted the *utias* by burning the grass to drive them out (Herr., I, 66, Oviedo, fol. 38); and that they were expert fishers and also given to hunting (Moralis, p. 290); we have no knowledge at all as to the manner in which the aborigines hunted or fished.

We have, however, some valuable pieces of information on these arts as practised by the Cubans. The latter captured parrots in this wise:—They "set a boy of ten or eleven years of age on a tree with a live parrot and a little grass or straw on his head, when he touched the parrot's head with his hand it cried out, the others, that were so numerous, hearing it, resorted thither, and, lodging on the tree, the boy, who had a small rod in his hand, with a noose at the end of it, clapped it about each parrot's neck, they imagining that the rod had been a twig of the tree, and drawing them to him, wrung their necks and let them fall, till the ground underneath was covered with them, and thus he might kill thousands, for as long as the parrot that was tied made a noise, the others never left the tree" (Herr., II, 14).¹

These Cubans also possessed nets and fishing-tackle (Church., II, 588), and were in the habit of visiting uninhabited islands to hunt and to fish (*ibid.*, p. 590). They had also fishhooks (*ibid.*, p. 616). It is remarkable that they made use of the peculiarity of sucker-fishes, which they called *reves* (?), in order to catch both other fish and turtles. These fishes when tied "by the tail run themselves against other fish, and by a certain roughness from the head to the middle of the back, they stick so fast to the next fish they meet, that, when the Indians perceive it drawing their line, they draw them both together" (Church., II, 616).

According to Sebastian de Ocampo, at *Xagua*, in Cuba, fish were pent up in the harbour as safe as if they had been in fishponds, being enclosed with reeds or canes, stuck in the ooze very close together (Herr., I, 323).²

¹ Cf. Samoan pigeon catching (Turner's "Samoa," Lond., 1884, p. 127.)

² Cf. The salt-water artificial fish-pools at the Island of Peru, Gilbert Group (Turner's "Samoa," p. 298).

Muñoz (pp. 235 and 245) mentions twice, that the natives at Hispaniola brought Columbus venison, by this he must have meant the flesh of the *utias* already referred to (*Food*).

Agriculture.

Agriculture was so well established that they could no longer exist without its practice, and when in consequence of the cruelties of the Spaniards the aborigines "refused to sow their lands with any grain for making bread, but had destroyed all that was left of the harvest" (Benzoni, p. 26, and also Angl., p. 185), the wretched people suffered very much more from starvation than did their oppressors. We have numerous and repeated references to the cultivated lands, and there is little doubt as to the great extent of their plantations (Muñoz, pp. 221, 227, &c., Benzoni, Oviedo, &c., &c.).

As we find to be the case among other races who have arrived at this stage of progress they had a vague tradition that agriculture was an introduced art.¹ They believed that originally they had not been in the habit of cultivating *iucca* and *maize*, but had been content with other products growing wild on the island. The *iucca*, they said, was first found by a wise man, *Bohuitihu*, who, by transplanting it to his garden, improved its quality. At first it was deadly poison to all who ate it raw, but perceiving it to be of pleasant taste they persevered in attempts to make it useful, until finally they discovered that the juice was poisonous (Moralis, p. 299). The *maize* they considered to have been likewise chosen from among the seeds of nature (*ibid.*, p. 300.)

The implement for cultivating the soil was simply a stave hardened in the fire, and which they called a *coa* (Herr., I, 184); Oviedo (fols. 102–103), calls it a *macana*. This tool was apparently used for this purpose only, and not for fighting; for Angleria (p. 202) tells us that after the defeat of the *Ciguaians* one of the chiefs brought the Lieutenant 5,000 men, "without weapons, saving only such instruments as they use in the tillage of their ground."

Dr. Chanca says they "neither know how to dig, nor have the means of digging more than a hand's depth" (p. 69), but this statement refers to mining operations. As might have been expected there were certain fixed periods during which cultivation was carried on (Angl., p. 215). In Cuba we are told the natives grubbed the ground before planting the *iucca* (Herr., I, 46); but the operation was more probably one of simply clearing

¹ Cf. "Orig. of Agriculture," Journ. Anthropol. Inst., XVI., p. 105.

by burning. In Hayti the ground was not touched until after rain, when the soil was soft (Oviedo, fol. 102). Benzoni (p. 83) states "they do not prepare the earth for sowing the grain, but making a small hole they put in three or four grains, and covering it over suffices" while Oviedo (fols. 102–103) tells us they only cultivated land which originally grew timber or canes, the natural prairie not being considered fertile. The land was cleared by burning. The seed of the maize was dibbled a pace apart between each hole, the hole being made by a stick worked with vertical motion, and the seed to be sown was carried in a little bag hanging from the cultivator's neck (*ibid.*). In some provinces *maize* was harvested twice a year (Benzoni, p. 83). Depredatory birds were frightened from the fields by children who sat in sheltered stages in the trees and where they kept up a continual shout (*ibid.*).

The plant of the root *iucca*, from which they made their *cazabi* bread was the second staple crop. Cuttings about two feet long were planted "in heaps of earth called *conuchi*,¹ and at the end of two years they form a large root." These roots are not taken up until required for bread-making, as they soon spoil (Benzoni, p. 85). Angleria (p. 280) gives a somewhat more detailed account of the preparation of the soil for *iucca* planting, but in this case it is not clear whether he is describing the methods in use among the Haytians or among the aborigines of the mainland.

They also cultivated the *battata* (sweet potato) and *haies* (yams) (Benzoni, p. 85, and others, also Oviedo); and numerous other less important vegetables. Ferdinand Columbus, in speaking of the Cubans (Church., II, 589), believed that cotton was not cultivated, but grew naturally. If it grew wild in Cuba and the natives made use of it in that state, the same conditions would probably hold good for Hispaniola, but cotton was so largely in use in all the islands that we may consider it was to a certain extent domesticated.

Irrigation was also extensively practised. Moralis (p. 301) tells us that in *Xaragua*, in *Haxua*, part of *Caiabo*, in the lake region, in *Yaquino*, part of *Bainoa*, there was little rain, and "in all these regions are fosses or trenches made of old time, whereby they convey the water in order to water their fields, with no less art than do the inhabitants of New Carthage and of the kingdom of Murcia."

Judging from an incident related by Pane (p. 632) the value of the fertilising property of urine was understood.

¹ On the Orinoco cassava plantations, or clearings generally, are called *canucos* (H. A. Wickham, "Rough Notes," pp. 21, 46, 59, 74).

We have no record as to the division of labour between men and women in the field work.

Domestic Animals.

Although at Cuba and at St. Mary's the inhabitants had tame dogs (Church., II, 588, 589, 617), none are mentioned as existing in Hispaniola. If, however, by *Zuruquia* Dr. Chanca means *Xaragua*, then the Haytians may have had domesticated fowls, &c., for in describing the island he says (p. 43) "no kind of domestic fowl has been seen here, with the exception of some ducks in the houses of Zuruquia."

The natives were much troubled with *nigues* or *jiggers*, which got into their limbs and bodies (Benz., p. 87) and they also suffered from lice, which occasionally fell into the dough (*ibid.*, p. 84).

Marital Relations.

These islanders were polygamous. Columbus states it seemed to him "the men were content with one wife, except their chief or king to whom they give twenty" (Major, p. 13). Pane says:—"They used to have two or three [wives], and the great men twenty-five or thirty" (Church., II, p. 633). Angleria tells us that *Bechico Anacacoa* had thirty wives and concubines (*op. cit.*, p. 190), and Moralis mentions that the chiefs take as many wives as they please (*ibid.*, p. 301). According to Oviedo (fol. 72), all those who could afford it had more than one wife, whilst the caciques had as many as they pleased; finally, Benzoni relates:—"The Indians take as many wives as they like, though one is the principal and commands all the rest" (*op. cit.*, p. 82). But Oviedo, again, contradicts this last statement, for, according to him, the cacique's wives all lived, ate, and slept with him together, under one roof, on terms of equality among themselves, and although there was one generally better beloved or nobler than the rest, this did not give her any right or title over the co-wives (*op. cit.*, fol. 74).

"When the women have an infant, they carry it to the sea shore, or to a river to wash it, and without any further ado they suckle their children" (Benzoni, p. 83).

According to Columbus the women seem to work more than the men (Major, p. 13). The women also ground the maize, made the bread, and prepared the kava (Benzoni, pp. 85 and 86). Professor Mantegazza ("L'Amour dans L'Humanité," Paris, 1886, p. 227) says that Columbus found marriage between relations of the first degree illegal in Hayti. We have been unable to find any evidence for this statement.

Education.

The chiefs gave their children to the wise men to be taught, as Moralis (*op. cit.*, p. 289) puts it, the origin and success of things and to learn to recite the deeds of their ancestors in peace and war.

Games and Amusements.

We have frequent references to their dancing and singing, although Benzoni only mentions it in connection with their worship (*op. cit.*, pp. 79 and 83). But dancing and singing were resorted to as matters of pleasure. According to Moralis (*op. cit.*, p. 289) they sing songs and dance to them, and play on timbrels made of fish shells. "They exercise themselves much in dancing, wherein they are very active, and of greater agility than our men, by reason they give themselves to nothing so much, and are not hindered with apparel, which is also the cause of their swiftness of foot" (Moralis, p. 289). Except on occasions of public rejoicings, such as a marriage of a cacique, or a victory after a battle, the men and women attended the dances separately (Oviedo, fol. 69.) During the dance men and women supply the dancers with drink, and when the dances are completed they are all dead drunk, which only happens when the song is a solemn one and not tedious (*ibid.*, fol. 71). Angleria describes the festivities which were held when *Bechico-Anacacoa* returned to his province with the Spanish lieutenant. The chief's wives received him "bearing in their hands branches of date trees, dancing and singing;" these branches which "they bore in their right hands when they danced they delivered to the lieutenant with lowly courtesy and smiling countenances." On this occasion (Oviedo, fol. 70) 300 virgins took part in the dance. The Spaniards were introduced to a common hall where "after many dancings, singings, maskings, runnings, wrestlings, and other tryings of mastery," two bodies of men fought before them, in which four men were killed (*op. cit.*, p. 190).

Scillacio's description of dancing is as follows:—"Several women at once, having their hair confined under wreaths and turbans, start off from the same line sometimes with an ambling, sometimes with a slower movement. The plates of metal which they wear attached to their fingers are mutually struck against one another, not merely in sport, but for the purpose of producing a tinkling sound. They accompany this sound with a voice not deficient in modulation, and singing that is not wanting in sweetness; and in a gracefully voluptuous manner, through

winding mazes, execute a languid dance in beautiful order, with multiform involutions, while no one claims a conspicuity above her companions Being at last both excited and fatigued by the sport, they hurry forward with equally accelerated steps, and in a more petulant and frolicsome mood, and with voices raised to a higher pitch, finish their dance" (p. 89).

The chief game, however, was one played with a ball. According to Oviedo (fol. 86–87, *op. cit.*) every village had a cleared space for playing the game of *batos*, surrounded by stone seats—but for the *caciques* pretty carved stools were placed. The ball was made by boiling the roots of certain plants, was black, and from the description appears to have been indiarubber. Sides are taken of 10 or 20 each, and he compares the game to football, only the ball is propelled by the head, neck, or shoulder, but most frequently by the thighs or knees, and must not touch the ground to be considered well played. If it falls dead, then the side which has allowed it to do so, lose the game. They were wonderfully skilful at this game. The men and women never played together but sometimes the men play against the women, the young married women who thus played changing the long apron for a short one. According to Herrera (*op. cit.*, I, 166) the ball was made of the gum of a tree.¹

Communications.

The modes of communication were simple. There were no roads, "for the Indians make their ways broad enough but for one man to pass at a time" (Church., II, 612), and the existence of these purely primitive pathways is confirmed by an incident in a revolt mentioned by Herrera (I, 303), in which he states that a soldier met twelve Indians, "one after another, as is usual with them, nor could they go otherwise by reason of the narrowness of the valley."

In spite of these narrow pathways it was evidently the custom for the chiefs to be carried in a sort of litter, for Columbus tells us that the *Cacique Guacamari* was so carried (Church., II, 592 and 593). This chief's son was carried on the

¹ Cf. McNair, "Perak and the Malays," Lond., 1882, pp. 262–3. "They are very expert, too, in tossing the raga, or wicker-ball, which is thrown in the air to one of the party, and the object then is to keep it up, this being done with hands, feet, shoulders, or knees, every part of the body being brought into play to keep the elastic ball from falling to the ground. Their dexterity over this is wonderful" It greatly resembles our football. Im Thurn says the Guiana Indians have a game of ball, but he does not describe it. The New Mexicans had a game of ball which was played in almost exactly the same way (Bancroft, "Native Races," I, 586); and the Nahua nations had specially prepared grounds on which to play this identical game (*ibid.*, II, pp. 297–8).

shoulders of a man of note, and the chief's brother, who walked on foot, was led under the arms by two great men (*ibid.*). After the conquest the Indians had to carry the Spaniards about on their shoulders (*ibid.*, p. 620), and *Guarionexus*, when pardoned for revolting, was carried home on his people's shoulders.

Clothing.

Doctor Chanca says: "They all . . . go naked as they were born, except the women of this island, who some of them wear a covering of cotton which they bind round their hips, while others use grass and leaves of trees. When they wish to appear full dressed both men and women paint themselves, some black, others white, and various colours, in so many devices that the effect is very laughable; they shave some parts of their heads, and in others wear long tufts of matted hair, which have an indescribably ridiculous appearance" (Major, p. 64). Columbus tells us: "Both men and women go as naked as they were born, with the exception that some of the women cover one part only with a single leaf, or grass, or with a piece of cotton, made for that purpose" (*ibid.*, pp. 5-6). In describing a festival, Benzoni (*op. cit.*, p. 79) says the men were "painted black, red, and yellow, with plumes of parrots' and other feathers, with ornaments of sea-shells round their necks, their legs, and their arms. The women were not painted at all; the girls were quite naked, the married women had a covering hanging from their waist," and elsewhere (*op. cit.*, p. 83) he states, "respecting clothing they all go naked." Chanca (*op. cit.*, p. 37) also says, they have the hair "clipt irregularly, and paint their heads with crosses and a hundred thousand different devices, each according to his fancy, which they do with sharpened reeds." According to Angleria (*op. cit.*, p. 190) at Xaragua the women "were all naked, saving that their privie parts were covered with breeches of Gossampine cotton; but the virgins having their hair hanging down about their shoulders, tied about the forehead with a fillet, were utterly naked." But the women of the upper class wore the apron down to their ankles (Oviedo, fol. 73). And at Cuba (Church., II, 617) some of the sailors said they saw a man "clad with a white coat or vest down to his knees, and two that carried him had them down to their feet, all three as white as Spaniards." The Haitiens were said to cover themselves with the inward bark of the palm trees to keep off the rain (Herr., I, 74). The *Ciguayos*, a mountain people, wore their hair down to the waist (*ibid.*, I, 181).

Personal Ornaments.

Oviedo (fol. 69) says they painted (? dyed) the figures of the *cemis* on their bodies, and their rings had representations of *cemis* on them. Dr. Chanca states that he "saw one root of ginger, which an Indian wore hanging round his neck," but whether this was as an ornament or a fetish is not mentioned.

At Porto Rico it would appear only the chief men or *caciques* wore a piece of gold hanging on the breast (Herr., I, 378.)

At Samaná Bay "the hair was worn very long and hung in a bag made of parrots' feathers," and also long "as the women in Spain wear it, and behind on the crown of the head, they had plumes of parrots' or other birds' feathers" (Church., II, 596). The inhabitants here were, however, probably Caribs.

The Haytians appear to have had a quantity of jewellery and other personal ornaments. Columbus received on one occasion "605 pieces of jewellery of various colours, and a cap of similar jewel work which I think they valued very highly" (Chanca). "Among the 605 pieces of jewellery were eight strings of small beads made of white, green and red stones, one string of gold beads, one regal crown of gold . . ." (Churchill, II, 610). Dr. Chanca continues: "The Indians beat the gold into very thin plates, in order to make masks of it, and set it in a cement which they make for that purpose. Other ornaments they make of it to wear on the head, and to hang in the ears and nostrils, and for these also they require it to be thin. It is not the costliness of the gold that they value in their ornaments, but its showy appearance" (Major, p. 55). The visor masks, says Columbus, were furnished "with eyes, nose, and ears of gold" (Churchill, II, 595). Scillacio says that the gold was beaten out on a cylindrical stone highly polished. He also refers to the low estimation in which they held gold (*op. cit.*, p. 83). The first woman they caught had a plate of gold hanging at her nose² (Church., II, 592), and some of the Indians had "small grains of gold hanging at their ears and nostrils" (*ibid.*). Columbus was also presented with a "girdle, not unlike those used in Spain though differently wrought" (Churchill, II, 593). "The girdle was adorned with small fish-bones, like seed pearls, curiously wrought, four fingers broad" (Herr., I, 68). Scillacio speaks of a "dozen belts polished with admirable art, and some of them variegated with thin plates of gold, interwoven in the cotton fabric with wonderful skill" (*op. cit.*, p. 61). Elsewhere (p. 83) he states the gold was made into wreaths and turbans for the women. We hear also of "several things in gold," and "of

² See wood-cuts of nose ornaments, p. 198, of Im Thurn's "Among the Indians of Guiana."

other pretty things which hung about their necks" (Church., II, 595). Also of Indians with plates of gold on their head (Herr., I, 74). *Guacanagari* and his subject chiefs had crowns of gold (*ibid.*, 76). The plates of gold were not cast but beaten between two stones. They evidently set a great value on silver (Herr., I, 76). The same author tells us that they made use of a red dye from a fruit of a tree called *Bisa* to protect [*sic*] themselves from the sun, or when they were in war (*op. cit.*, I, 184).

Burials.

When a *cacique* died two (or more ?) women were buried with him alive, not because they wished it, but because they were forced to. So Oviedo tells us (*op. cit.*, fol. 73). *Moralis* says: The best beloved of the King's wives or concubines are buried with him. When *Bohechico Anacacoa* died his sister ordered *Guanahattabenechina*, the fairest wife and her two waiting maids, to be buried with him. This beautiful woman was buried "with all her jewels, and twenty of her best ornaments. Their custom is, to place beside every of them in their sepultures, a cup of water and a portion of the fine bread of *cazabi*" (*op. cit.*, p. 301). But to come back to Oviedo, we find that the custom of immolating the wives was not general throughout the island. In other cases, when a *cacique* died his body was tightly enveloped in cotton bands bound round from head to foot. He was placed on a little stone in a hole dug in the ground like a cave the roof of which was supported by timber, so that no earth should touch him, and with him were buried his jewellery and other things dear to him during life. The obsequies lasted fifteen to twenty days, the neighbouring Indians and chiefs coming to pay the deceased honour, funeral orations were composed describing his great deeds, and his [personal] property was divided among the visitors (*op. cit.*, fol. 73).

The mode of burial apparently differed among the kingdoms. Ferdinand Columbus enumerates various ways not only of burial but also of helping the wretched beings to start on their last journey. In some cases the *cacique's* body is opened and dried at the fire, "that he may keep whole. Of others they keep only the head. Others they bring in a grotto, and lay a calabash of water and bread on his head." *Caciques* were burnt in the house where they died, but strangled when they are at the last gasp. Some are turned out of their house, and others put into their hammocks, with bread and water, and left to die, and some who are dangerously ill are taken before the *cacique*, who decides whether they are to be strangled or not (Church., II, 621). Sir Robert Schomburgk claims to have discovered an Indian burial

ground in the Valley of Constanza ("Athenæum," 1852, pp. 797-799). On his own showing he did not examine the ground, nor did he get any skulls, but he asserts it to be an Indian burial ground, apparently because there are above 1,000 mounds, and because the present inhabitants say it is. This, of course, is no evidence.

The Spaniards found on several occasions heads wrapped up with great care, sewn up in baskets. Heads thus preserved were supposed to have been those of parents or of others held in veneration (Major, pp. 52-3).

It is doubtful whether these people buried the bodies of their enemies, for while Herrera states that the murdered Spaniards of the first expedition were buried (*op. cit.*, I, 113-114). Chanca mentions the finding of the *unburied* bodies (Major, p. 45).

Poetry and Music.

History, such as it was, and the deeds of their forefathers were handed down to them in certain meters and ballads called *areitos*. "They have also songs and ballads of love, and others of lamentations and mourning, some also to encourage them to the wars, with every one of them their tunes agreeable to the matter" (Moralis, p. 289). The same authority states that *Anachaona* "in making rhymes and ballads was counted a prophetess among the best" (*op. cit.*, p. 301).

"When they sing these songs, they play upon an instrument called *Maiohavan*, made of wood, hollow, strong, yet very thin, and as long as a man's arm, that part where they play on it is made like a smith's tongs, and the other end like a club, so that it looks like a calabash with a long neck. This instrument they play on is so loud, that it is heard a league and a-half off; and to that music they sing those songs they have got by heart. The chief men play on it, who learn it from their infancy, and so sing to it according to their customs" (Pane, p. 626).

The above drum or gong is very different from that described by Oviedo, which is made of a hollow cylindrical piece of wood with a rectangular hole on one side of the cylindrical surface and another hole in the form of an H opposite to the first. The H hole is placed uppermost and when beaten with sticks makes a "bad noise." Oviedo also says there is only one tune and one time kept in their songs (*op. cit.*, fol. 70). There exists such a gong in the British Museum.¹ Benzoni also mentions a drum (*op. cit.*, p. 79) which appears to have been played by the chief or priest only.

¹ Captain Cameron ("Across Africa," 1877, I, plate facing p. 357) describes wooden gongs from west coast of Tanganyika very like those of Hayti.

We have already seen (*Games*) that they possessed timbrels of fish-shells.

Language.

Columbus on his first voyage of discovery found that the natives he took with him from the island *Guanahani* (Watling Island) could converse freely with the natives of Cuba and Hispaniola, and we find later on that natives of Hispaniola could speak the language of, or make themselves understood by, the inhabitants of Jamaica. The Watling Islanders did not quite understand the language spoken at Samaná Bay (Church., II, 596). There were, however, evidently differences in dialect for we are informed by Ramon Pane (p. 631, Vol. II, Churchill Coll., fol. 1704) that the Admiral told him that the language of the province *Madalena Maroris* was different from the rest, and not understood in all parts of the country, and that he was to go to the Cacique *Guarionex* on the west coast "whose language was understood all over the island." Herrera (p. 166, Vol. I, Engl. ed., 1725) confirms this and speaks of the dialect spoken in the province of Guarionex as the "courtly language."¹

With regard to the pronunciation of the language we have only one short statement of Andreas Moralis handed down by Angleria (p. 292), which runs: "All such words as in their tongue are aspirate are pronounced with like breath and spirit as is *f*, saving that herein the nether lip is not moved to the uppermost teeth."

Dr. Brinton appears to be the only authority on the Hispaniola language, and in his excellent paper entitled the "Arawak Language of Guiana," (reprinted Phil., 1871, 18 pp., 4to.), he gives a vocabulary of Haytian words, and a short dissertation on the language.

In all the known words the letter *l* is conspicuous by its absence. We meet with it however in a suffix *el* which appears to correspond to our *-son* (Welsh *ap*, Russian *-vitch*). Pane speaks of a man called *Giaia* (p. 622) and refers to this man's son as *Giaiael*, and again (p. 630) he speaks of a cacique as father to *Guarionel*. *Anacacoa's* sister's name was *Anacaona*.

We may mention here that Mr. Prax ("Bull. de la Soc. de Géog.," Paris, Ser. IX, 1855, p. 202) says "the word *Haïti* should be written *Ahiti* which is composed of three roots, *a*, flower; *hi*, great; *ti*, country. Hence *Ahiti* signifies flower

¹ In Samoa there are three different languages spoken—the first a strictly court language, spoken by the king and highest officials; the second by the lesser nobles and warriors; and the third by the common people (A. St. Johnston, "Camping among Cannibals," Lond., 1833).

of great countries." He gives no proof whatever in support of this explanation.

At a future date we hope to revert to the language of Hispaniola.

Navigation.

Columbus states "they navigate all these seas" (Major, p. 8). "They have in all these islands very many canoes like our row-boats, some larger, some smaller, but most of them larger than a barge of eighteen seats. They are not so wide, because they are made of one single piece of timber, but a barge could not keep up with them in rowing, because they go with incredible speed, and with these canoes they navigate among these islands. . . . I have seen in some of these seventy and eighty men each with his oar" (*ibid.*, pp. 10–11). According to Angleria (*op. cit.* p. 189) "their boats are made only of one tree, made hollow with a certain sharp stone (for they have no iron) and are very long and narrow." At Cuba, a canoe was seen "drawn upon land under a bower . . . it was made of the body of one tree and as big as a twelve-oared barge." Later on a similar canoe was discovered 70 feet long that would carry 50 persons (Church., II, 591). Another canoe is also mentioned with 40 men in it (*ibid.*, 592). Oviedo (*op. cit.*, fol. 89) says the canoes are hollowed out by an axe aided by fire and that the natives burnt and struck alternately. The drawing he gives of one, with its square ends, however, does not convey the idea of swiftness ascribed to them by Columbus. Oviedo states that they are easily upset, but not sinkable, and in this respect they were better than the Spanish boats. From the same drawing it would appear that the paddles much resemble our spades with cross handles and very long blades. Oviedo states that the Caribs had cotton sails (*ibid.*, fol. 89).

The natives of Porto Rico had "boats made of one piece of timber, square at the ends, like trays, deeper than the canoes, the sides raised with canes, daubed over with bitumen, and not flat as the canoes but with a keel." (Herr., I, 340). Benzoni's drawing of a canoe on the coast of Cumana (S. America) is furnished with almost square ends (*op. cit.*, p. 6).¹

Habitations.

According to Oviedo (*op. cit.*, fol. 85) there appears to have been no rule as to where a settlement should be made and their

¹ On the Orinoco, according to H. A. Wickham's "Rough Notes," p. 99, the large canoes with the extremities squared above the water are called "casco," the smaller ones being apparently called "curiara" (p. 59); on the plates facing pp. 160 and 237 the author gives us drawings of the pitpans in use on the Mosquito coast, and which bear a remarkable likeness to the canoe drawn by Oviedo.

villages were consequently found in every situation; their fields were close to their homes, and every village had a space reserved for the game of the *batey*. Dr. Chanca (*op. cit.*, p. 52) speaks of things being "hidden in the grass around their houses," hence we may infer that occasionally at least they were not in the habit of clearing the ground in their immediate neighbourhood. The settlements were of all sizes varying from a village of seven or eight houses (Chanca, p. 51) to a district "so populous that it seemed to be one continued town for a league in length" (Church., II, 618). Dr. Chanca states that the Indians lived in miserable hovels covered with grass and dampness (*op. cit.*, p. 52); but judging by the account and by the two sketches left us by Oviedo, their habitations must have been remarkably good, and were furnished with window-spaces. One kind of house appears to have been hexagonal (or round). Posts were inserted in the ground five to six paces distant, these were joined at the top by wooden braces, and from this point upwards branches were fixed on all round, meeting at the top of a central post, thus giving the dwelling a conical roof. The roofs consisted of straw, leaves of the *Bihao*, cane tops, and palm leaves, but the walls were formed of thick canes set in the ground side by side. The whole was strongly corded together by larger vine ropes (rattans). The houses of the *Caciques* were larger, longer, and furnished with galleries, &c. (Oviedo, fol. 85). The chief's house also had a raised seat inside (Herr., I, pp. 74 and 76). The Cubans appear to have had habitations similar to those in use at Hispaniola; they lived in towns, in houses of timber covered with straw, and made after the manner of pavilions (Church., II, 589); concerning the island of *Borrique* (Porto Rico), "there were many good houses, though built with timber and thatched, and a square in the midst of them, and a way down to the sea, very clean and plain, and the walls of canes interwoven, or wattled,¹ with greens artificially wrought as in Valencia" (Herr., I, 108).

Columbus on his journey to *Cibao* "passed by many Indian towns, the houses whereof were round, thatched, with such a little door [-way] that he who goes in must stoop very low" (Church., II, 612). "They had no doors, but barred access by means of canes or sticks, this was, of course, no defence, but according to their custom no man dared break in at a door he finds so barred" (*ibid.*).

The Indians appear to have had a fair variety of furniture. Angleria (*op. cit.*, p. 192) describing *Anacaona's* treasure-house, says, her treasures consisted of "chairs, stools, settles, dishes,

¹ Cf. Im Thurn, p. 205.

potingers, pots, pans, basins, trays, and such other household stuff and instruments, workmanly made, of a certain black and hard shining wood:" these were manufactured at the island *Guanabba* (now called Gonaives; it lies some miles off Port-au-Prince). We also hear of a handsome round table, made like a dish, in a *cemi*-house (Church., II, 621). The people, it would seem, did not use stools, but "all sat down on their heels" (Benzoni, p. 79). Columbus we hear on one occasion was seated "on a chair with a low back the Indians used, and they were very neat polished and bright, as if they had been made of jet" (Herr., I, 74). Oviedo (*op. cit.*, fol. 69) also mentions the carved stools. At Cuba, a seat is described which was made of one piece in strange shapes, and almost like some creature that had short legs, and the tail lifted up to lean against, which is as broad as the seat for the convenience of leaning, with a head before, and the eyes and ears of gold (Church., II, 589).¹

Benzoni (p. 79) describing a feast says, "they all sat down on their heels," but Oviedo (fol. 86) describing the game of ball says, "they sat on stone seats."

It was from these people that hammocks were introduced to the Old World. Oviedo (fol. 72) describes them as sometimes made of patchwork (?), and at others of open network. Occasionally they were made so broad that one could lie in them transversely. Both Oviedo and Benzoni draw them as though they had a stay at each end to keep them expanded, but in their description nothing is said of this.

Fire.

Fire was obtained by the simple drill twirled between the hands, with three sticks. Two dry light sticks of brown wood were tied firmly together, and the point of the drill of a particular hard wood was inserted between the two, and then worked (Oviedo, fol. 90).² The Cubans carried firebrands about with them (Church., II, 589).

String.

The posts of their houses were fixed together with rattans (Oviedo, fol. 85), but the ropes with which the Spanish colonists were strangled during Columbus' absence are described as made

¹ The British Museum possesses a small black ebony stool from St. Domingo answering to the above description.

² Judging by an illustration on p. 49 of Benzoni's quoted work the natives of Nicaragua made fire in a similar way. No where else is there any record of a people making fire by means of working into two sticks tied together. Oviedo gives a drawing of how this is done, so that there can be no mistake about it.

of a certain broom (? *Bromelia*) like the esparto (Church., II, 609).¹ Angleria, however, speaks of native hemp for making ropes demanded as a tribute (p. 189).

Weaving.

In translating Benzoni's history, Rear-Admiral Smyth calls attention to the fact that from the use of the word rag (*una pezza*), the arts of weaving and spinning are presupposed (*op. cit.*, pp. 87 and 89). In Benzoni's time, whether these arts were already known to the aborigines or not, it is more than likely that cloth would have been in use. He tells us that the juice of the *iucca* was squeezed out through a rag (*op. cit.*, p. 85), and that their wine was filtered through a cloth (*op. cit.*, p. 87). His drawings of hammocks also make them appear to have been made both of pieces of cloth and of netting. Herrera says the natives gave the Spaniards cotton cloths (*op. cit.*, I, 68), and Columbus says some of the women used a cover of cotton cloth made for that purpose (Major, p. 6). We are also told that at Cuba they none of them made use of the cotton to clothe themselves, but only to make nets for their beds, which they called *hamacas*, and in weaving aprons for women to cover their nakedness (Church., II, 589). When *Guacananagari* pretended to have a wounded leg, that limb was bound up with bandages (Chanca, *op. cit.*, p. 58). According to Ferd. Columbus (Church., II, p. 608), in the houses at Guadaloupe were found cotton, spun and unspun, and looms to weave " (see Herr., I, 107).

The evidence as to their knowledge of this art is, therefore, somewhat meagre.

Pottery.

Pottery was a well developed art amongst these people, for collectors seem to be able to find fragments marked with the images peculiar to the Indians of this part of the world. Herrera speaks of their " earthenware pitchers, handsomely made and painted " (I, 68). According to Benzoni, the *cacique's* bread was baked in a round pipkin, and they used also large jars or vases and pipkins in the manufacture of their wine (p. 84), and he also refers to their idols being made of clay (p. 78). Angleria (p. 192) mentions special pots for cooking *iguanas*.

Basketwork.

Although none of the historians make any reference to the manufacture of baskets, nor to the material of which they are

¹ The Guiana Indians make string of a *Bromelia*. See Im Thurn, p. 284.

made, we have occasional mention of them proving that basket work was well known to these Indians. On several occasions the Spaniards discovered men's heads sewn up with great care in small baskets in Hispaniola (Chanca, p. 522) and in Cuba also (Church., II, 591). Benzoni in describing a feast speaks of "baskets adorned with roses and various flowers" (p. 80). The Caribs would appear also to have had baskets, as Columbus found them at Guadaloupe full of men's bones (Church., II, 608). These baskets may however have been stolen in their raids.

Calabashes are frequently mentioned.

Stone Implements.

Dr. Chanca found they had "many tools, such as hatchets and axes, made of stone, which are so handsome and well finished that it is wonderful how they contrive to make them without the use of iron" (Major, p. 68).

They used stones to triturate the maize (Benzoni, p. 83): they committed suicide with flint knives (*ibid.*, p. 78) and they cut up the *yucca* roots with "sharp stones that they found on the beach" (*ibid.*, p. 85). Oviedo gives a drawing of an axe (*op. cit.*, fol. 89) in which the stone axe-head is fixed to the haft by insertion into a hole.

Some crudely executed engravings of stone and earthenware figures found in St. Domingo were published on Plate I, Vol. II, of Descourtilz's "*Voyages d'un Naturaliste*," Paris, 1809, and Nicolson in his "*Essai sur l'Histoire Naturelle de St. Domingue*," Paris, 1776, gives on Plate 9, drawings of characteristic images, &c., and on Plate 10, drawings of stone celts well finished, one of which is much like a European axe. The best selection of drawings of stone articles from St. Domingo was published by the late Mr. Edw. T. Stevens in "*Flint Chips*," London, 1870, on pp. 224-235. Among the more interesting may be mentioned "a stone bowl with sculptured ornament upon the outside" and a *four-legged* "metatl." Mr. Stevens also figured one of those curious stone collars which have been found in St. Domingo, Porto Rico, and St. Thomas, but the uses or objects of which still defy explanation by anthropologists. A paper on Cuban Antiquities, by Andres Poey appeared in the "*Trans. Amer. Ethnol. Soc.*" (Vol. III, Part I, pp. 183-202, New York, 1853), illustrated with a few woodcuts of little stone carvings or images. There appears to be some slight similarity between these images and those of St. Domingo. The author incorporates in his paper a fanciful theory of W. Walton's ("*Present State of the Spanish Colonies*," London, 1810, Vol. I, pp. 167-171) on the connection between the Hispaniolas and the followers of Brahma which, it is

needless to add, will not stand investigation. Schomburgk ("Jour. Ethnol. Soc.," Lond., iii, 1854, pp. 114-122) says the carved stones "are only found where there is sure evidence that the Caribs inhabited or visited the place," but he, on his part, gives no evidence in support of this statement.

Metallurgy.

Gold there appears to have been plenty, apparently obtained only at the surface, as Chanca, already quoted, records they had not the "means of digging more than a hand's depth," but Angleria, (*op. cit.*, p. 188) says that when the Spaniards arrived at the gold mines of *Cipanga*, "they found certain deep pits which had been digged in old time," and which Columbus thought must be the mines of Solomon.

Benzoni refers to idols made of gold and silver (p. 78): Oviedo (fol. 69) of gold only. We have already described (*Personal Ornaments*) how the gold was beaten into shape. There is no record of its having been smelted.

There exist copper mines in Hispaniola, but we find no mention that the natives made any use of this metal, although at Martinique Columbus describes Carib women who "arm and cover themselves with plates of copper, of which metal they have a great quantity" (Major, pp. 14-15), but this appears to be hearsay.

At Guadalupe some of the men on the second voyage declared they had found an iron pan, but Ferd. Columbus says this must be a mistake, as "there never was anything of iron found among those people" (Church., II, 607). Later on the sailors affirm they met with iron hatchets on the same island (*ibid.*, 634). These implements may have been stolen, for Columbus (Major, p. 6), Chanca (*ibid.*, p. 68), and Angleria (*op. cit.*, p. 169) all unite in stating that the Indians had no iron.

The Indians valued brass more than gold and highly valued tin (Herr., I, 141).

Topography.

According to Columbus the Indians were well acquainted with their surrounding islands (Major, p. 10). Angleria, Herrera, Muñoz, and others describe the position of the towns, &c., which we need not discuss here.

Swimming.

Moralis tells us "they are the most expert fishers by reason that they are accustomed daily to plunge themselves in the

ivers, so that in a manner they live no less in the water than on the land " (p. 290). On one occasion, at Guadaloupe, when it was too rough to land the boats, Columbus sent the Hispaniola women ashore by swimming (Church., II, 634). On another occasion some women escaped from the Spaniards by swimming considerably more than half a league (Angl., p. 175). Oviedo also says they were splendid swimmers (fol. 89).

NOVEMBER 23rd, 1886.

FRANCIS GALTON, ESQ., M.A., F.R.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The election of C. W. ROSSETT, Esq., as a corresponding member was announced.

The following presents were announced, and thanks voted to the respective donors :—

FOR THE LIBRARY.

From the DEPARTMENT OF MINES, Sydney, N.S.W.—Annual Report for the year 1885.

From the PEABODY ACADEMY OF SCIENCE.—Ancient and Modern Methods of Arrow-Release. By Edward S. Morse.

From the AUTHOR.—Can Europeans become Acclimatised in Tropical Africa? By R. W. Felkin, M.D.

— A Contribution to the Determination of Sex. By R. W. Felkin, M.D.

— The Scientific prevention of Consumption. By G. W. Hambleton.

From the ACADEMY.—Kongl. Vitterhets Historie och Antiquitets Akademiens Manadsblad, 1885, Nos. 157–159.

From the ASSOCIATION.—Proceedings of the Geologists' Association, Vol. ix, No. 6.

From the INSTITUTION.—Journal of the Royal United Service Institution. No. cxxxvi.

From the SOCIETY.—Journal of the Society of Arts. Nos. 1773, 1774.

— Boletim da Sociedade de Geographia de Lisboa, 1886, Nos. 3, 4.

From the EDITOR.—Nature. Nos. 889–890.

— Science. No. 196.

— The Photographic Times. No. 268.

— L'Homme, 1886, No. 16.

— Bullettino di Paletnologia Italiana, 1886, Nos. 9, 10.