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IFUGAO ECONOMICS

BY

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## 1. ENVIRONMENT

### SITUATION

Ifugaoland is one of the most isolated regions in the Philippines. It is situated on the eastern side of the Cordillera Central, which, beginning at the northwestern coast, runs south almost to a latitude marking the middle of Luzon Island. The area is about seven hundred and fifty square miles, but, owing to the mountainous character of the country, the actual surface is probably one and three-quarter times as great. The longitude of Ifugaoland is 120° 52' to 121° 33' East, the latitude 16° 20' to 16° 58' North. From the crest of the Cordillera Central on the west, where it is bounded by the sub-provinces of Benguet, Bontoc, and Lepanto, regions inhabited by others of the non-Christian tribes, it extends to the Magat on the east, being there bounded by Isabela and Nueva Vizcaya, regions inhabited by tribes whose Christianization and submission were accomplished during the first of the last century. These two provinces had an estimated population, respectively, of 98,748 and 34,665 in 1916.

From Manila, one reaches the habitat of the Ifugao as follows: one day by train to San Fernando, Union, one day by carromata, a kind of covered cart drawn by ponies, to Tagudin, thence by trail to Cervantes (two days), to Bontoc (one or two days), to Benaue in

Ifugao (one or two days). The total travel is therefore from six to eight days, but in the rainy season the time, owing to delays from bridges out, and bad weather, is likely to be much greater. The time required for the transportation of freight from or to Manila varies from two weeks to two months. There are other highways of approach, which, however, are much less feasible for the transportation of baggage or freight: the route from Baguio to Buguias, Benguet, thence by foot across the Cordillera Central to Kiangan, Ifugao (the capital); this route requiring five to seven days. The other highway runs from Dagupan to San Nicolas, Pangasinan (one day), thence to Bayombong, Nueva Vizcaya (three days), thence to Kiangan (two days), this trip requiring six or seven days provided one encounters no delays. The time required by the mails to Manila (there is one mail a week) is, on the average, ten days. One cannot depend on a reply from Manila by mail in less than a month.

It may consequently be seen that the Ifugao are a people economically isolated in the highest degree. They have practically no foreign market whatever for their products. For their imports they must pay middlemen's profits three or four times over as well as high transportation charges. And the ordinary middleman's profit in the Philippines and especially in these isolated regions is a thing to make a retailer in more civilized countries green with envy.

#### CHARACTER OF THE COUNTRY

The region that the Ifugao inhabit is mountainous in the extreme. The mountains are either the eastern slopes of the Cordillera Central or spurs from that range. In the part of the region that is at present inhabited by the Ifugao and that can be properly termed their habitat, the only comparatively level land is the Ligaue plateau. This is a former lake bottom. It has a superficies of some five hundred acres. Within the limits of the *political division* termed the "Subprovince of Ifugao" have been included parts of the plains on the western side of the Magat river, with the expectation of colonizing the Ifugao on irrigated tracts of these plains in the future.

It is in the valleys and pockets between the mountain ranges that the Ifugao live. Usually those living in the same valley have been at peace with each other, but with the inhabitants of other valleys they have been for the most part at war or engaged in numerous blood feuds. This fact has led to non-intercourse, and non-intercourse

in its turn has led to the growth of dialectic differences and economic independence. These latter have reciprocally led back again to non-intercourse and enmity. There has been little division of labor and little utilization of the special resources of a particular locality. There are a few exceptions however.

#### CLIMATE

The climate of Ifugao is varied and uncertain in the extremest degree. Every village has a different mean temperature and different daily extremes of temperature, depending principally on the altitude and proximity and height of the surrounding mountains. On these same factors, too, depends the number of cloudy days and the amount of sunshine. As compared with other regions of the Philippines, it may be said that even the sunniest village in Ifugaoland receives little sunshine. The rice growing period is during what in nearly all other provinces is the dry season and the season in which the rice fields are barren; that is to say from February to June inclusive. The reason for this is that during the period July to December, the usual rice growing period in the lowlands, there is not enough sunshine to mature the rice well. This, however, is by no means invariably the case. During the year 1911 there was fully as much sunshine in the second half of the year as in the first. In some years during October and November there are not more than a half-dozen days of sunshine; during 1912 there were about forty-five.

Fully as uncertain as the distribution of the sunshine is the distribution of the rainfall. Probably it is of even greater moment to the Ifugao. Broadly speaking (and he would be bold who would venture to speak otherwise) there is only a trace of the dry season apparent in a lesser frequency of rains and a lesser amount of rainfall during March and April. There may be a period of four weeks in which no rain falls. When this is the case the rice fields suffer.

There is a well-pronounced rainy season in July and August; a slight cessation in which the weather is cloudy and foggy; followed by another rainy season during November, December, and January during which the weather is foggy, cold, and disagreeable.

Whatever its distribution throughout the months, the rainfall during a year is invariably heavy, probably between one hundred and one hundred and twenty-five inches a year, and possibly more. Storms in which from sixteen to twenty-four inches fall are not infrequent. This heavy precipitation has made the mountains ex-

tremely steep: indeed the steepness would discourage any less intrepid agriculturists than the Ifugao. But they are not discouraged, and formidable indeed is the precipice to which they do not append a rice terrace if there be a good spring above it. And the field so located catches the "cream" of the silt carried down by the rivulets higher up.

#### SOIL

The soil generally is fertile. In some places however the loose loam has been carried completely away, leaving a very fine clay. The disadvantage of this clay is not so much in its lack of fertility as in its imperviousness to the rainfall, which prevents the formation of springs.

The Ifugao's method of rice culture creates its own soil fertility; it is only water for irrigation that he has to have.

#### CORRELATION OF HABITAT, RELIGION, AND ECONOMICS

The uncertainty of climate has extremely far-reaching effects, both direct and indirect, on the life of the Ifugao. Directly it affects crops and health; indirectly it has been a factor in building up one of the richest religions in the world, for in order to obtain the favor of good weather and consequent good crops, the Ifugao performs a great number of religious feasts every year. The obtaining of animals for these feasts (pigs, chickens, ducks, carabaos) is the principal economic motive in the male Ifugao's life. The climate of Ifugao is not a healthy one. There is a great deal of sickness among the people. In order to secure recovery, expensive religious feasts costing from ₱2.00 to ₱300.00 are given. The wealth of the religion has arisen from the variation of climate and the rough and dangerous nature of the mountains and the perils of the torrents and the landslides. Religion is a great factor, the greatest by far in the commercial activities of the tribe and in the economic activities of the male Ifugao.

#### FORESTS

The forest wealth of Ifugao has at one time been much greater than it now is. The richest soil is always in the forests and from time immemorial the practice has been prevalent, wherever a village was located near a forest, of making a clearing (*kayingan*) for planting. As a result the most valuable and extensive forests have long since disappeared.

In some villages a threatening lack of timber for houses has led to the cultivation of forests. In no place, however, is the lack of firewood serious.

The woods are of all groups. Wherever the altitude is not too great, there is a wealth of molave, *narra*, and *ipil*. The greatest supply of these is found in Payauan forest, an extensive wooded area in the southeast. *Banutan* (molave?) to the Ifugao is most valuable as a material of which to make spades with which to cultivate the rice fields. Of all woods at his command it combines to the highest degree hardness and toughness.

#### MINERAL DEPOSITS

The mineral resources of the region are practically nil, being limited to two fairly important salt springs and to sulphur deposits near which is said to be a small volcano. One of the springs is in the Asin valley in western Ifugao, the other in eastern Ifugao. The sulphur deposits have at present no value to the Ifugao. They are in the Asin valley.

In several regions there are deposits of potter's clay. The most notable is at Mongayan, six kilometers from Kiangan. Pot-making is an important industry in that village, for it supplies a region having a radius of from twelve to eighteen kilometers.

#### GRAZING LANDS

In the present habitat of the Ifugao, there is not much grazing land for the reason that on all mountains that are steep, *runo*, a thick, coarse, tough grass, prevents the growth of other grasses. However there is a little grazing land. In the recently included river plains to the east and south there is pasture for a million cattle. Should rinderpest ever be stamped out of these islands, cattle raising will be a most important industry in Ifugaoland. At present it is inconsequent.



## 2. PRIMITIVE FOOD GETTING

By "primitive food getting" I mean all those means of obtaining food which generally are employed by peoples in the lowest stage of culture, savagery. While the Ifugao is not a savage, his rank in the next higher stage of culture, barbarism, is owing to his fixed residence, to his highly developed religion, and principally of all to his wonderful agriculture. For in government he is absolutely an anarchist,<sup>1</sup> and of writing he is absolutely ignorant. But while in the matter of food getting he is a highly skilled farmer, in many sections he has by no means abandoned the more primitive methods of savagery.

### HUNTING

Hunting is important in all those districts that are near a grassy uninhabited region of considerable extent, notably in Mayaoyao and neighboring districts, in Babuyan, Amdangale, Ligaue, Kiangan, Banao, Payauan, Atipolo. All these districts (I use the word district to denote a single valley and its inhabitants) are located in or near the foothills of the Cordillera Central, not more than a day's journey from the plains of the Magat river basin. The inhabitants of the more mountainous districts to the west and on the slopes of the Cordillera do not hunt to such an extent for the reason that there is not so much game. There is at least one exception to this rule: the people of the Asin valley and of Butitio, who live on the slopes of pine clad mountains where grass grows, and where there are a considerable number of deer.

The principal hunting is directed to deer, wild carabao, and wild hogs. East of Mayaoyao wild carabao are more numerous, I suspect, than anywhere else in the Philippines. The constabulary company stationed there makes great savings in its mess funds on account of the proximity of this food supply. The intrepid Ifugao of that region attack these animals (as dangerous to hunt as lions or tigers) with their spears alone and bring them down. Not infrequently a hunter loses his life; but this merely adds a reason for his friends to bring down the animal, for the Ifugao's code of honor is founded on an "eye-for-an-eye" and a "tooth-for-a-tooth" basis; and he applies this *lex talionis* to animal as well as human enemies.

<sup>1</sup> R. F. Barton, *Ifugao Law*, present series, xv, 1-186, 1919.

The only weapon the Ifugao has is his spear. He knows of the bow and arrow; admits its superiority as a weapon; but the conservatism inherent in savage and barbarian has precluded his adopting it. This is not the only instance in which conservatism of temperament becomes an economic factor either in connection with the Ifugao or in the case of his kindred, civilized or non-civilized.

Ifugaos who make a practice of hunting keep from three to six dogs. The value of a good hunting dog runs from ten to a hundred pesos. The higher prices are paid for a dog that will catch hold of a wild pig and so cause it to come to bay; or one that will in the same way drag down a deer. If the hunter has only one or two dogs, on hunting trips he combines his kennel with that of some other man whose number of dogs is likewise limited.

From two to ten persons usually hunt together, the meat being shared according to the proportion of dogs furnished by each. Usually the spearer of an animal demands and receives a larger proportion of the meat.

The manner of hunting is this. Arrived at the hunting grounds, the dogs are dismissed with the cry *hoois! esa! hoois! esa!* According as the dogs are well-trained and valiant, one or two or three are sent together, the others being sent in other directions. The dogs scour the region until one or another picks up a "hot" trail. When this happens, the other dogs turn from their courses so as to meet their companions at a point ahead of the quarry. The men also scatter out at points ahead of the dogs or at points to which the hunted animal is likely to run. If the animal be a deer, the hunter keeps quiet until the dogs come near, when he either bounds to within spear-throwing distance (fifty to eighty feet), or, if his dogs be valiant, encourages them by cries to catch hold of the deer, in which case the animal is quickly dispatched. Some hunters, too, have their dogs so well trained that, advised of the whereabouts of their masters by cries, they drive the quarry to them. If the animal chased is a wild pig, it runs only till very angry, cornered, or seized, when it comes to bay; in which case the dogs bay around it till the men come up and spear it.

Wild pigs and deer are caught sometimes in pitfalls. The disadvantage of this form of hunting is the amount of labor involved and the uncertainty of results. Wild pigs are sometimes caught by setting out a quantity of strong rice wine, and malt. The animal becomes drunk and is easily dispatched. The disadvantage of this

method of hunting is that if more than one or two pigs come, none of them is made drunk and the hunter loses a quantity of good rice wine that he might have put to better use.

The number of animals killed in a year is great. Anannayu, a hunter of Kiangan, has fifty skulls of deer and wild pigs in his house. He has been hunting less than three years. The figures may not seem large but in the light of what follows their significance is heightened.

The hunting season is the idle time—the period of three or four months between the rice harvest ending in July and the spading time beginning in October or November. In the rice-growing season, too, the man of the house may hunt during a few days when he has no other work.

Because of a taboo hunting is never carried on when the moon is in its dark phases. Hunting is correlated with religion. If the hunter is unsuccessful he attributes it to the resident spirits of the hunting ground. Sacrifices of chickens are necessary to appease the place-spirits and to induce them to give up the game, for all game is looked upon as being the property of these spirits.

Among other animals hunted is the civet cat, *ampke*. This animal is eaten; its tail is thought to be a specific against malaria in the lowlands as that of the monkey is thought to be a specific against smallpox. An added reason for hunting it is that it kills chickens and eats ripening coffee. The monkey, *bulangon*, is sometimes killed; but the eating of it is tabooed since it is believed to have descended from man. However, some poor families do eat it, first cutting off and throwing away the hands in order to lessen the semblance to a human being. The wild cat, *tabo*, is killed and eaten. Its pelt is valuable. The forest python is very highly prized as food. Its skin is also valuable, being used as a tobacco pouch, and to make the back belt of the native loom. It, too, is a specific against malaria. In 1912 the Ifugao killed the largest cobra, *hakoko*,<sup>2</sup> that any of the Americans there had yet

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<sup>2</sup> These are King cobras. I afterward saw one that measured twelve feet. On another occasion I saw a cobra crawling alongside the trail. Thinking that it was a python, I rode to a nearby village, and informed some men. "Is the python crawling?" one of them asked. "It is," I said. He nonchalantly ascended into his house, got a small bolo not much larger than a butcher knife, and with this inconsequential weapon, followed me to where the snake was. When he saw it he said, "Kao! Are you an enemy of mine, Barton, that you seek my death?"

"You know that I am not your enemy! Why do you say such a thing?"

"That is a cobra. If we even saw the inside of its mouth we should both die. Let us get away quick!"

seen. It was nearly nine feet long. They cut off its head and ate the body. The iguana is highly prized here as throughout the islands. Another somewhat smaller lizard, *bania*, is also eaten.

#### SNARING AND TRAPPING

On ridges over which fruit bats, *paniki*, are accustomed to fly, nets, *kinaman*, are set. These nets are about twenty feet long by twelve or fifteen feet wide. The bat always chooses the straightest possible line of flight, taking advantage of any natural or artificial gap in the ridge. Consequently it is in such gaps between the hills, or in gaps made by cutting away the timber on the crest, that the nets are set. A bat is worth five bundles of rice (fifteen to twenty-five centavos according to season).

The most effective as well as the most dangerous trap is the *balai-i*. This is essentially a spear set on a powerful spring. An excellent drawing may be found in Reed's "The Negritos of Zambales."<sup>3</sup> The trap is the same in Lepanto and Ifugao as in Zambales. This trap, if such it can be called, is used principally against wild pigs. In former times it was used against human foes also. The Ifugao say that several Spaniards lost their lives by it during the first expeditions to Kiangan. It is not much used now because of its danger to men. Besides, the owner is put under the disagreeable necessity of vomiting in the path on both sides of the trap as a warning to other men that a *balai-i* is set in that place. That which is vomited serves as a warning to men and a bait to the pigs. If one has vomited in the path, he is held blameless if a neighbor falls a victim of the *balai-i*. One of the powerful war deities of the Ifugao is termed *Mon-balai-i* (he who sets *balai-i*).

Rice birds and sparrows are caught by setting simple nooses in the grass. The bird flies unwittingly into the noose and is caught by the neck. This work is done by small boys. Any birds except the omen birds, the serpent-eagle, and the crow, which are of sacred origin and, consequently, tabooed, may be eaten if the Ifugao is sufficiently ingenious to catch them. Small birds are frequently caught by means of an excellent bird lime, which is made from the sap of a tree. It is smeared on the twigs of some tree that is in fruit and seldom fails to bring results.

<sup>3</sup> William Allan Reed, *The Negritos of Zambales, Philippines*, Department of the Interior, Ethnological Survey Publications, xi, part 1, 1904, p. 45, fig. 1.

## INSECT FOODS

Locusts are caught in nets. In a year when these insects are numerous a large swarm of them is greeted by shouts which warn all the neighbors. Men, women, and children armed with nets, *kinumling*, rush out to capture them. They put them in grasshopper baskets. At night when the locusts settle in the coarse mountain grass called *bilao*, the people go out with locust baskets fashioned by slitting the end of a large bamboo, bending the slats thus formed outward and interweaving concentric slats so as to form a funnel-shaped basket ending in a tube. They shake the grasshoppers into these baskets, whence they drop into the bamboo tube lower down. When the tube is full they empty it into prison baskets. The locusts are prepared for food as follows: they are, first, boiled; second, the wings and feet are picked off; third, they are dried in the sun till perfectly dry and consequently very brittle; fourth, they are pounded into a powder and stored away in tight-stoppered bamboo tubes.

Large dragon flies, *banguluan*, are caught in a very interesting manner. A small dragon fly is tied by a thread ten or twelve centimeters long to a stick about a meter in length. The small dragon fly is dangled about till one of the larger species swoops down on it to make it his prey. The larger one is then swatted, impaled on a sliver, and the hunter repeats the operation. There are three species of dragon fly which serve the Ifugao as food.

Some villages eat crickets. The *liok* is an important insect food. This is a flying white ant which at one season of the year, namely the period immediately following the opening of the rainy season, swarms in great numbers. On first emerging from the ground it can fly but feebly and it is then that it is caught. It is fried in lard when lard is obtainable. It is quite rich and really very palatable. The *allaga* is a red ant that builds colony nests on the limbs of trees. The trees bearing the nests are felled, the nests opened, the adult ants dispersed, and the larvae collected from inside, cooked as in the case of the *liok*, and eaten. The large water bug, *kalakal*, in the rice fields is eaten as are the "pinch bug," *lingaling*, and various beetles and other insects: the *lokomboi*, *bai*, *abal*, *balingog*. A kind of flying beetle resembling a June bug, but larger, is caught with lights at night in great quantities. This is the same beetle that is an important article of food in the lowlands.

## FISHING

The fish known as the *dolog*, not only in the Ifugao language but in many other Philippine dialects, is the most important here. This fish is, as the Ifugao calls it, "sowed" in the rice field frequently after the beginning of the rainy season. That is to say, two or three large individuals are taken from a lake and placed in the field—usually a large one—in which it is desired to raise a crop of fish. The spawn grow with remarkable rapidity, so that within three or four months they are six inches long. When the time finally comes to spade the field, a fish-catching is held, to which are invited friends and relatives. Equipped with the common hand fish trap of the type used throughout Luzon, boys, girls, and women scurry here and there plumping the traps down amid shrieks of enjoyment. The *dolog* has a direct economic importance in that considerable quantities of this fish are sold to wealthy Ifugao, and American officials. At night the *dolog* is fished for with a torch. Sometimes it is caught by means of a rude trap which in essence consists of a door set on a "figure 4" trigger. The fish in swimming trips the trigger with his body.

Frogs, *bakbak*, are caught in considerable numbers in parts of Ifugao by means of torches. They are gutted and cooked, skins, heads, backs, and all. The toad, *palpal*, is said sometimes to be eaten by the very poor when unable to bear longer their hunger for meat.

Snails are eaten in great number. One kind of water shellfish, a univalve, really ranks higher in importance than any other animal food. It may be an astounding statement to make but I have not the least hesitancy in saying that the lowly *ginga* (water "clam") ranks more important as an article of food than the time-honored much-prized hog. The *ginga* is not sold because it is so plentiful that to secure it any one may go to any rice field and pick it up. At least four nights out of five it is an article of diet in the houses of poor and wealthy alike. It is boiled and eaten thus: a little hole is picked in one end of the shell to admit air and the flesh sucked out from the larger opening. The shells are kept until a quantity has been collected and then burned with dry *runos* into lime for chewing with betel nuts.

Minnnows and river fish, eels, and turtles complete the list of fish foods.

## WILD VEGETABLE FOODS

The array of these foods is indeed imposing. I have listed about fifty. Yet their importance in the Ifugao diet is not much greater than that of wild cherries, haws, hackberries, and wild blackberries in rural America.

Most important are the various palm cabbages, *hangpat*, the buds of rattans, of the palma brava, the areca palm, the coconut palm, and so on. The bud of the palm called *bangaan* (a kind of palma brava) is poisonous, but by repeated parboiling becomes edible. I shall never forget the night of vomiting, pounding pulse, and fever which taught me the necessity of parboiling, nor the jibes of my Ifugao friends when they diagnosed my case. Next in importance comes the *pagalat*, the edible fern, and banana and *abaká* flowers. There is a great deal of wild *abaká* in the hills about Kiangan. There are various roots in the forests which are edible in time of stress but they are of very trifling importance.

The number of wild fruits is remarkable. I have obtained the names of some thirty. Of all these, the *pivit*, a kind of red raspberry which resembles a strawberry, and the *dulnuan* persimmon are the only ones that really commend themselves to the American palate. However, it is worthy of mention that American children in the Philippines take just as readily to Philippine wild foods as they would to wild cherries and haws in the United States.

## SUMMARY

The following table shows the probable average proportional part of the annual subsistence of the Ifugao that is obtained by primitive means, or from primitive sources—the food that a people in a savage culture would live on almost entirely.

Food	Part of total subsistence
Obtained from hunting and fowling .....	.0045
Obtained from fishing (except ginga) .....	.008
Ginga (small rice field univalves) .....	.08
Insect foods .....	.0005
Wild vegetable foods .....	.001
Total wild foods .....	.0940

## 3. AGRICULTURE

## FOOD OBTAINED BY AGRICULTURE

The following table shows the average proportional parts of the Ifugao's annual subsistence, classified on the approximate basis of crops or source.

TABLE 2

Food	Part of total subsistence
Camotes .....	.42
Rice .....	.32
Maize .....	.04
Imported animals: pigs, carabaos, etc. ....	.024
Garden truck, semi-domestic fruits .....	.06
Domestic animals and fowls .....	.042
Wild foods (see table 1) .....	.094
Total .....	1.000

The following table is intended to show the relative importance of the sources of Ifugao subsistence.

TABLE 3

Food source	Part of total subsistence
Agriculture .....	.84
Primitive food getting .....	.094
Animal culture .....	.042
Importation .....	.024
Total .....	1.000

TABLE 4

## SHOWING LOCAL VARIATIONS OF DIFFERENT FOOD CONSTITUENTS OF IFUGAO ANNUAL SUBSISTENCE

Food constituent	District of Kiangnan	District of Benaue	Subprovince of Ifugao
Camotes .....	.135	.57	.42
Rice .....	.584	.24	.32
Ginga (rice field "clam") .....	.08	.11	.08
Imported animals .....	.04	.013	.024
Fishing .....	.007	.01	.008
Hunting .....	.008	.002	.006
Animal culture .....	.05	.03	.042
Corn .....	.006	.005	.04
Garden truck .....	.09	.02	.06
Total .....	1.000	1.000	1.000



## CAMOTES

The camote or sweet potato is the most important of all crops to the Ifugao. By this statement I mean that he could more wisely forego any other crop than this. Nevertheless, the Ifugao despises camotes. To say that a man has only camotes to eat is to pronounce him poverty-stricken. Yet camotes are the chief food of more than half the people.

Camotes are grown almost anywhere but preferably on the mountain side. This is because the mountain side is easier to clear and tend than flat land. The worker does not have to bend over so far. In Kiangan a camote field is abandoned after two or three years, but in other districts, Benaue and Kurug, it is cultivated a much longer period, although the time ultimately comes when the field has to be abandoned. Clearings are made, some of them covering as high as forty acres in a body, by the people of a village. This work in Kiangan district is done principally by women. On the boundary of the tract cleared by a family a line of stones is laid or a ditch dug. The clearing is usually the cutting down, burning, and grubbing out of the roots of runo and cogon grasses, and perhaps of a few shrubs and young trees. After the clearing, the soil is turned with a sharp pike of wood.

It is allowed to stand for two or three weeks in order to mellow thoroughly. When the moon is in its right phase the soil is turned out so as to form little crescent-shaped pockets in the mountain side about four inches wide in the middle, two or three inches deep, and two feet in length. This is in order to prevent washing when the heavy rains fall, and achieves the purpose most admirably. On mountain sides so steep as to be almost unscalable, there is very little washing. The water falls into the pockets and sinks through the soil instead of running over it and washing out rills. Camotes are propagated from tender slips cut from the ends of the vines, these being the quickest growing. These slips are stuck into the soil at the rim of the crescents. The largest camotes grow in the Kiangan district because people there change their fields every two or three years. The soil is consequently richer and produces better. Title to the old field remains vested in the original owner, however, for three years or until the land has so grown up to runo grass as to have completely undone any work he has done on it. At that time any other person may take up the land, clear it, and again plant camotes.

Camotes serve not only as food for the people but as feed for hogs. Usually the leaves of the vines, together with the parings from the camotes of the family meal, are boiled and then fed to the hogs. Sometimes however the camotes themselves are fed.

There are from twenty to thirty varieties of camotes grown in this subprovince.

#### RICE CULTURE

The principal agricultural work of the Ifugao, besides camote culture, is rice culture. Camotes grow on hillsides so steep that none but an Ifugao could climb them; the soil need not be even fertile and the crop is not subject to pests. Rice on the other hand requires irrigation, fertility, and constant care. It is subject to many and various pests. Camotes, requiring little work, are not thought highly of as food, but around the much-prized rice centers, to a great extent, the Ifugao religion. A man's social status is fixed by the amount of rice he harvests; his wealth is in his rice fields.

#### RICE FIELDS

Ifugao rice fields are worthy of high rank among the wonders of the world. There are places where they reach from an altitude of 2500 feet to one of 5000 feet, and many places where they extend from an altitude of 1500 feet to one of 4500 feet. Above 5000 feet rice does not grow well. The steeper the mountain the greater the work of constructing the field. This is because the field must be narrow in proportion to the height of the terrace. The terraces are walled wherever the earth is of such character that they would not hold without walls. In the regions inhabited by a pure Ifugao population, the walls are of round hard river stones; in regions inhabited by the Silipanes (a sub-branch of the Ifugao) the walls are frequently of split stone and not nearly so durable. The pitch of the terraces varies throughout Ifugao. Needless to say, if there are to be any fields on a steep mountain, the pitch of the terraces must be great. In Benaue the terraces seem to rise above one almost perpendicularly. Jenks states that there are in Benaue terrace walls seventy feet high. This is an exaggeration. It is true that the highest terraces in Benaue are about fifty feet high; but in all Ifugao I have never seen a walled terrace much over twenty feet in height. Even behind these high walls the field is often only eleven feet wide. This fact gives some idea of the labor that has been expended in preparing an area to feed or partially feed 125,000 people.

## VALUE OF RICE FIELDS

The value of rice lands varies throughout the subprovince. It depends on several factors: (1) The amount of unoccupied land in the vicinity it would be possible to irrigate. (2) The amount of labor necessary to construct rice fields in that vicinity and the cost of labor there. (3) Location. (The best location is one completely surrounded by other rice fields, at a considerable distance from the margin of the cultivated area. This is because the rats, wild pigs, deer, and monkeys destroy a large part of the yield of marginal fields.) (4) Water supply. (Springs are the best.) Fertility is rarely a factor because the Ifugao method of agriculture tends to render a field more fertile year by year.

In Kiangang the value of an acre of rice fields centrally located and well watered would usually be about ₱500. In Piuong or Amganad, where there is no unoccupied land capable of irrigation, the value would be about ₱800. In Jaliap, Bolog, or other towns recently settled by immigrants, the value would be about ₱250. In Kiangang a field centrally located—that is, in the center of a cultivated area of considerable extent—is worth six to twelve times as much as one located on the margin of a cultivated area.

Transfers of real estate were formerly rare except by inheritance. Sales are becoming more frequent. The Ifugao custom is for the buyer to make a feast to which his own kin and the seller and the seller's kin come. The buyer and his kin then give presents to the kin of the seller. These presents are spear heads or long knives, usually—sometimes, in these latter days, money.<sup>4</sup> Both parties then join in prayers to the deities that the field lose none of its fruitfulness by transfer, but that instead it gain thereby; that the rats, the mice, and rice pests molest not the crops, and that the deities miraculously increase the crop year by year as it is harvested. The kin of both parties are witnesses to the transfer. The presents to the seller's kin are for the purpose of making them content and making them truthful witnesses in case of future altercation. For there might be a possibility that the descendants of the seller's kin would some day inherit the field, and the presents serve to recompense the loss of this chance however remote it be; and secondly, since Ifugao ethics permit of a careless handling of evidence so as to favor kinfolk, it is well that

<sup>4</sup> A full description of ceremony and presents in transfer of fields is to be found in *Ifugao Law*, present series, xv, pp. 46-50, 1919.

the seller's kin be under some obligation to the buyer in order that they be straightforward and truthful.

These formalities are gone through with only in the case of the transfer of rice land. Good camote fields are sometimes sold; but in Kiangan district at least, where camote fields are abandoned after two or three years, and where the land reverts after two or three years to the public "commons," it is looked upon that only the camote crop is sold. Camote fields then are not, in the Ifugao's conception, real estate. Houses are also sold, but as a house can be taken apart, transferred, and set up again with the help of one's kin in a day, and as town lots have no value in an Ifugao village, the house does not fall in the class of real estate. Rice lands are the only real estate, then, that the Ifugao has.

#### PREPARATION OF THE FIELD FOR PLANTING

In September or October the dikes, *banong*, are built up. Thus, during 1912 they had been worn down a great deal, and possibly broken in places. After repair of the dikes, the field is spaded to a depth of about a foot and the soil heaped up in mounds a foot and a half to two feet high. The water is then turned off. These mounds stand as thick as the surface of the field will permit. In this the Ifugao shows himself a highly skilled agriculturist. Did he know the reason for this practice he would even be a scienced one. All year the fields have been under water. Even after rice harvest the water is not turned off for the fields would then grow up with dense vegetation. There has been little action of the air on the soil; little decomposition of vegetable matters by oxygen. In the mounds the air has an excellent opportunity to decompose and mellow the soil.

#### PLANTING

The fields are left in this shape from two to four or five weeks or until ready to be planted. Planting time usually begins in Kiangan about Christmas and continues until the middle of February. In some years, however, as for example, 1912, planting is delayed by drought.

Usually about the first of December seed beds are planted. Heads of rice are laid in the middle of a field—in the middle in order to prevent their being stolen by rats or crows. They are laid close together for it is well that the seed rice plants be too thick to grow

rapidly. Time is thus left to wait for rains, if need be, or labor, if need be, without the rice in the seed beds growing too large for transplanting.

When the field is ready for planting, the water is turned on, the little mounds are scattered, and the loose soil worked until the whole paddy is a mud puddle—a “loblolly.” The dike, which has dried and in drying cracked, is repaired. The field is then ready to be planted.

The rice plants from the seed bed are transplanted by women. The reason given for allotting this work to them is that the women’s fingers are nimbler than the men’s. The transplanting is done without the aid of any instrument, such as the sharpened stick used by the Pangasinan people.

Following the planting there is a period of about two months during which the women clean the fields of the scum that covers the surface of the water and of any weeds that may have grown. They push scum and weeds into the mud where their decaying enriches the already fertile soil. All of the fields are worked thus about three times. When the rice begins to “sucker out,” the suckers are removed down to a uniform number. According to the fertility of the particular field, from three to six stalks are left. There follows a period during which the lower blades of the stalks are removed. At the same time the paddy dikes are cleaned of weeds. When I first saw the tremendous amount of time and labor expended in stripping the stalks of their lower leaves, I thought that a tremendous amount of labor was being wasted on a useless piece of work; but when I saw side by side the yield of two fields, one of which had been neglected in this particular, I recognized that for some reason the Ifugao is correct in his cultivation.

All the work in connection with rice culture, from the time the fields lie prepared for sowing, except the cleaning of the terraces and dikes, is performed by women.

#### TREATMENT OF PESTS

Rice is subject to a number of pests—insect pests, scales, and rusts. When infected plants are found, all infected parts are picked off and burned or left in the hot sun to dry. In case a field is found to be badly infected, recourse is had to religious ceremonials. Rice pests are thought to have been originated by one of the highest deities, *Bangauwan*, in order to compel men to give (sacrifice) animals to him.

## HARVEST

The rice in the lower altitudes is always the first to be planted, and it is the first to be harvested. The harvesting consists in cutting off each individual stalk about twenty-two centimeters below the head, binding the heads into bundles by a bamboo or *gaddang* tie, carrying the little bundles so made up to the granary, and stacking them below it. The knives used are: first, and usually, the Ifugao *ua* or small knife whose blade, rigid in the handle, is set at a greater obtuse angle of about 225° with the handle; second, the knife of the Ilokano and Gaddang, consisting of a blade set across a perpendicular handle and held, the handle in the palm, the blade in front of the palm and passing between the middle and ring fingers. The heads are bound into bundles of such size that, in Kiangan district, five or six, in the Lamot district, two and a half, and in the Benaue district, six or seven, bundles make a *ganta* of threshed rice (three liters).

After being stacked under the granary, the rice is left about two weeks until it has thoroughly dried, and until fervent religious prayers, ceremonials, and sacrifices have been performed to secure its miraculous increase in quantity.

Harvest time is a highly festive period for all classes. For the old men and women in their capacity as priests and priestesses, it is a continuous round of feasting and drinking with real picnic food and inexhaustible jars of rice wine. For the poor who have lived principally on camotes during the month preceding, it is a time when they gorge themselves on rice and meat—rice and meat every day. For the young people there is singing and there is drinking; there is exchange of gossip, there is good food. And though the sun be hot and shoot down his rays until the heated glaring fields be like furnaces; they enjoy the work nevertheless. In the morning the sexes work separately. But after the heat of the day the two groups of workers gradually and slyly disintegrate and form two new groups. Married men and women work together and exchange witticisms and gossip, occasionally singing in concert. The young men and the unmarried women form a merry group, now singing love songs, now work songs; now screaming and squealing with laughter at the improvisation of one of their number who is singing or chanting extemporaneously—the genius of originality seems to dwell in rice wine! And now coarse (according to our standards) quips fly from

one to another, and are quickly picked up and returned with liberal interest. And before the work finishes there is an arrangement of trysting places.

The foregoing explains, I think, the preference of labor for agricultural work throughout the Philippines; for Ifugaoland is not the only Philippine locality where harvest time takes on a festive character.

Rice is much more highly prized as food than the camote. Why, then, is it not the chief food of these peoples? The reasons are these: (1) Land in areas of considerable extent suitable for rice culture is scarce, or requires long irrigation ditches and concerted labor for its development; requirements the Ifugao's social and economic development cannot meet. (2) Rice land in small tracts is not very productive because of the ravages of rats, wild pigs, monkeys, and deer on the border fields. (3) Owing to the Ifugao method of agriculture—turning the soil with a wooden spade—rice cannot be raised in quantities sufficient to make it more than fifty per cent of the total food of the people. In Kiangán district, where rice is sixty per cent of the subsistence of the people, fully one-third of the labor is imported from the poorer districts surrounding. (4) The season in which rice is raised is very uncertain as to rainfall. In 1912 the crop was not over one-fourth the average yield, owing to drought.

The first difficulty is being overcome by the subprovincial government, which is organizing and managing the irrigation of two large tracts of level land. On this land plows will be used, thus overcoming the third difficulty.

#### MAIZE

Maize is, in certain districts, more particularly districts inhabited by recent Silipan immigrants, the chief supplementary food. It is raised principally on limestone soils. It is planted in January or February in recently made camote fields, and matures in May or June, two or three months before the camotes. Sometimes it is planted alone. It is prepared for food by parching or it is pounded into a meal in the rice mortars and made into corn pone.

## SUPPLEMENTARY VEGETABLE FOODS

The *gabi* or taro, Ifugao *aba*, is grown principally on the dikes of the rice fields, and in quantities sufficient to allow a variation in diet, affording a change from camotes. The *luktu*, a yam, is grown in plots near the house, but not at all extensively. On the rice terraces and in the camote fields, and sometimes in clearings in the mountains made especially for them, various kinds of cowpeas, two or three varieties of lima beans, okras, green grams, and other legumes are grown.

## GARDENING

Gardening is very highly developed in the Kiangnan district. The method employed is the only one by which uniform success can be obtained in the Philippines, and reflects the greatest credit on the Ifugao's art as an agriculturist.

After the rice harvest the straw is pulled up, and together with all the earth that sticks in the roots is piled into numerous mounds about 35 centimeters high. In these mounds are planted cotton, beans of five or six different varieties, radishes, cabbages, lettuce, mustard, and sometimes peas. The water in the rice fields not only assures a water supply but prevents the approach of rats, mice, and insect pests.

The yield from these little mounds is large. The cabbages are propagated from slips from the stalk of a cabbage, the head of which has been removed. The heads are as large and firm as any to be found anywhere in the world. Women are the gardeners, and very expert.

## HORTICULTURE

Aside from coffee, which is an export crop and will be considered below, the Ifugao plant the following trees in their villages. Once planted, the trees usually receive no further care. They are: the jackfruit, *kakao*; the grapefruit, *tabuyag*, commonly called *lukban* throughout northern Luzon; the *littuku*, a kind of rattan producing enormous clusters of very sour berries about the size of a plum; a few orange and lemon trees; areca palms, "betel" so called; coconut palms; guava; bananas; an imported tree called *helesa* ("cereza"). There are two or three cacao trees in Kiangnan; but they do not produce. Economically the most important of the foregoing are the coconut and "betel" palms. Coconuts are valued at ten centavos each.



There are about three thousand trees in the three districts of Kiangan, Mongayan, Burnay, and Banao—the districts where coconuts are most raised. Why more of them are not planted is a hard question to answer. I believe it is because there is such a long wait between planting and fruition. A coconut tree is valued at about five pesos. Trees a considerable distance away are frequently transferred by sale. They may be located on another man's land. Their sale in no way affects the title to the land. There is no coconut plantation in Ifugao, and no export trade in coconuts. The bananas raised in Ifugao are for the most part of poor variety. There are a few *lakatans* but not many, for the people say that the plant grows so large that the typhoons damage it badly.

#### LUXURIES

The Ifugao have the two great luxury-dissipations of the world: smoking and drinking; together with a third which they share with the Malayo-Polynesian area: betel-chewing. The last named ranks second in religious importance and first in social and economic importance.

Everybody, even the poorest, chews betels. The common salutation is "Give me a betel nut," and the answer is "All right, where is your lime box?" or "your betel leaf," as the case may be. Betels are offered the deities in feasts; betels are ceremonially chewed in the arrangement of marriages.

The areca palm, which produces the betel-nut, grows sometimes fifty feet high. To obtain the nuts a woman will, in the case of a tall tree, tie her ankles so as to leave a space between the feet about the size of the palm trunk. Then by a series of bodily convolutions resembling the locomotion of a "measuring worm" she ascends the tree. All that applies to the location and sale of a coffee tree (see below) applies equally to the areca palm. The trees are valued at fifty centavos. Between divisions of the Ifugao tribe betel nuts are one of the most important export crops.

Sugar cane is grown in thickets, usually not very far from the house. Very little sugar is made. Far the most important use made of the plant is in the manufacture of rice wine. The juice is added to the fermenting wine. It makes a very powerful intoxicant.

Tobacco is grown in soil mingled with grass and weeds from the rice fields and laid on the tops of large boulders. From time to time

water from the fields is thrown on the rich soil thus formed. The tobacco plants grow rapidly and the tobacco is of good quality, but the Ifugao cure the tobacco by laying it in the sun and so ruin it.

In the Silipan districts, tobacco is cultivated in clearings.

#### EXPORT CROPS: COFFEE

Coffee is the only export crop raised in Ifugao. Coffee culture has its center in Kiangan. The trees bear heavily, and the coffee is of the very highest quality, far superior to that raised in Batangas and Nueva Vizcaya, but not so good as that of some parts of Lepanto and Benguet. The trees are planted in small patches irregularly about the houses, in the soil fertilized by waste deposited by the villagers, domestic animals, rice chaff, and the like. The plants for setting out are secured from those that come up as volunteers under the trees. When about two feet high they are transplanted to a plot cleared of underbrush but not of trees and herbs that are of sufficient height to shade the young trees. There have been a number of attempts to carry on coffee culture on a larger scale in little plantations removed from the villages. These have resulted in complete or partial failure. The reason seems to lie, however, in the greater neglect accorded the trees under such circumstances; although on account of the lesser fertility of the soil it could not be expected that trees so planted would bear so prolifically as those around the houses.

The coffee industry is one that is growing. It is encouraged both by the provincial government and by the schools. The former is propagating it extensively and the latter intensively. The government has a nursery and gives out plants to leading Ifugaos of the remoter villages. The schools in Kiangan and Benaue have each a nursery and give out plants to the pupils and a few to the villagers. During 1911-12 every boy attending the Kiangan school planted a little plot with from twenty to a hundred and fifty trees. This he was compelled to keep clean, attend to, and extend from time to time if the surroundings permitted of its extension. Over two thousand trees were planted by the Kiangan school in that year, and over five hundred in Benaue.

Outside of Kiangan district there is very little coffee culture. Some little there is in Nagacaran district and some little in Ligaue, Sapao, Mongayan, Lamat, and Benaue. In the latter town, where the people for the most part are very poor, it is surprising that there has not been more coffee planted. For coffee is the only cash crop the Ifugao has.

Fifty centavos a ganta is the traditional price of coffee. The Ifugao is very conservative, and the Christian *comerciante* from the lowlands reaps a rich gain. During coffee picking season he comes up with his wares and buys great quantities of coffee for fifty centavos, which he transports to Nueva Vizcaya and sells for more than twice that price, or to Isabela where it brings four times as much. Then, too, he advances a great deal of money to be returned in coffee at an even lower price.

The methods of removing the berry from the seed are very primitive. For the most part they are: snipping between thumb and forefinger, and chewing. There are in Kiangan district, however, three primitive machines for this work, consisting of rollers turned by a crank, which crush the fleshy part completely off some of the berries, and split the rind on the others, making easier the two processes mentioned above. The seed with its outer shell is then dried in the sun. Coffee is always sold with the outer shell intact. The method of ridding the coffee of the rind can be much improved.

The Ifugao himself does not drink coffee.

Coffee trees are frequently transferred in sale. The value of a bearing tree is about one peso. Trees, too, are used as collateral and mortgaged. The sale of the trees in no wise affects the title to the land on which they stand, but the owner of the land may not clear off the trees nor injure them.

#### CAUSES DETERMINING THE LOCATION OF CROPS

In a mountainous region such as the habitat of the Ifugaos, the only way to irrigate is by means of terraces. These terraces have already been described. The Ifugaos do not terrace for other crops than rice. There is always sufficient rainfall to grow camotes without irrigation. Not so, however, on the other side of the Cordillera among the Bontok and Lepanto Igorot; for these people having less rainfall irrigate no small proportion of their camote fields, constructing terraces for this crop. The terraces, however, are not so carefully constructed as for rice. The Ifugaos prefer land as nearly level as possible for rice, for the work of terracing is less. But for camotes they prefer mountain sides because they do not have to bend over so far in working their clearing, and because they say the camotes there grown have a better flavor. Level land is preferred for corn where it is possible to obtain it.

## SOIL AS A FACTOR

The soil in the rice terraces soon becomes black from humus. The soil itself is not much of a problem for even if it be not fertile at first, a few years' cultivation produces fertility. But the subsoil is a matter of great importance. It should be a clay. Otherwise a great deal of water is needed for irrigation and there is great danger of water shortage. With a fine clay subsoil, the principal water loss is from plant excretion and from evaporation. There is very little from percolation.

Camotes are said to be very hard on the soil. In Kiangang district rice is the principal food and camotes are not grown so extensively. Consequently there is plenty of land near the villages, and the camote fields are regularly abandoned after two or three years, allowed to grow up in rank mountain grasses, and to regain their fertility, other clearings being made in the meantime. In Benaue and other districts, the period of cultivation is much longer. The lessening fertility of the soil manifests itself in the decreasing size of the camotes.

Except in districts being populated by Silipan immigrants there is not much "kayingin," clearing, done. The forests in the larger and more thickly populated districts are usually a goodly distance from the villages, and their value is being more and more realized.

Undoubtedly the "kayingin" habit was once prevalent and the forests occupied a much greater area than now.

## IRRIGATION; PESTS; DIVERSITY OF CROPS

Irrigation is always by gravity. The most highly prized sources of water supply are springs, for they are not affected by a cessation of the rainfall so quickly as streams. Irrigation ditches sometimes creep for two miles along the mountain sides before reaching the fields they supply. From the upper terraces the water falls to the lower.

The seriousness of rice pests and their treatment has already been discussed under Rice Culture. Coffee pests are not so serious and nothing is done to counteract them.

There is sufficient diversity of crops that the people are not likely to suffer starvation. Hardship resulted in 1912 in some districts owing to the failure of the rice crop, their principal food, and the necessity of changing to camotes, a less highly prized food.

## ADVANCE IN AGRICULTURE

The Ifugao are advancing more rapidly in rice culture than any other people in the Philippines, I suspect. Their rice grains are probably the largest to be found anywhere in the world. The rice is of excellent savor and has a delicious odor much remarked upon by the Christian Filipinos who have a chance to obtain it. The yield is heavy.

The excellence of Ifugao rice is probably due in great part to the selection of the seed. I am not sure that there is this selection in all communities, but in most districts the largest heads having large grains are carefully selected and bound into large bundles for next year's seed. I do not believe that the Ifugao does this from a scientific standpoint. He is not sufficiently advanced in knowledge. He does it in order that by analogy next year's crop may have large grains and large heads. Analogy is one of the fundamentals of his religion and daily practices. When a boy's hair is cut for the first time, his elder kin gather and throw their spears at a banana stalk. The first who hits the stalk squarely cuts the boy's hair. This ceremonial hair-cutting is really the boy's initiation into the ranks of his male kin. By analogy, the boy will imitate—"follow" the Ifugao say—the excellent "spearmanship" of him who cuts his hair. But going back further, when the boy was about to be born, his grandfather recited a story of how Balitok, the hero-ancestor, went up on Mt. Santo Domingo to the very top, cut down a tree, stripped it of its bark, and giving it a toss slid it down four or five miles of mountain side to his very house. And then he prayed, "So let the unborn child travel."

## 4. THE ORGANIZATION OF AGRICULTURE

## LAND TENURE

All the land of the Ifugao is in small holdings. Taking into consideration the smallness of the Ifugao's wealth, there may be three or four men in the subprovince who have relatively large land holdings, but when compared to the haciendas of the lowlands they are insignificant. There is not a man in the subprovince who holds more than seventy-five or eighty acres of land, exclusive of forest land whose value is inconsequent. The following table shows the size of land holdings in three villages in the central part of Kiangang district;

that is to say in one of the wealthiest sections. It is not, of course, absolutely accurate, for the plots have never been surveyed; but the writer lived in Kiangan a number of years and has taken great pains in compiling this report.

TABLE 5<sup>5</sup>

No. of families	Population	No. of houses	No. of families holding 2 acres or more	No. of families holding between 1 and 2 acres	No. of families holding less than 1 acre	No. of families having no land
109	444	122	20	40	40	9

In Benaue, in some of the older Silipan settlements, in Piwong, Amganad, Kababuyan, almost the total area of irrigable land has been terraced. There being no new land to be taken up, the land has come largely into the hands of a few men in each district. Elsewhere in Mountain province, where the available area of cultivable land has been taken up, the same seems to be true: that there has developed a system of feudal lords and feudal land holdings. This is the case in parts of Lepanto, in Benguet, and in Bontok.

In Ifugao, this feudal system has vanished almost completely for the following reasons: (1) Remunerative employment has been offered the inhabitants by the American government by which they are enabled to live without submitting to the often times unjust treatment of their landlords. (2) The bringing of money into the habitat in sufficient quantities to displace the old rice currency and to make possible the payment of laborers, and render reasonable the demand of the laborers that they be paid in cash. (3) The old system, while extending the landlord more power, correspondingly made greater his troubles and responsibilities. (4) The opening of trails and the establishment of peace and order has made it possible for laborers to go to Isabela and Nueva Vizcaya, and there to work for wages, put their wages into pigs and chickens, bring the pigs and chickens back to Ifugao, and sell them at a profit. (5) The great amount of freight to be transported for the government, for the government officials, and for missionaries, *comerciantes*, and foreign residents, has made it possible for many to earn not only a living but to purchase small holdings themselves and so become independent. (6) Peace, and the equality of rich and poor before the law, have made it unnecessary for the poor man to have a protector.

<sup>5</sup> Census of villages of Pindungan, Umbul, and Ambabag taken by the author January, 1909. The wealthiest man in these villages has less than twelve acres of rice land.

However the old system has not entirely disappeared in the remotest districts. In the Kiangang culture area, this system is as follows: The landlord furnishes one half the seed and, if desired, rice for the year, but all rice that is advanced must be paid back doubled at harvest time out of the lessee's share. The landlord is not obliged to furnish animals for sacrifice. The lessee furnishes the labor and one half the seed. The crop is divided equally at the end of the year. The plan followed in the Kababuyan area, where rice land is scarcer, is, as we would expect, less favorable to the lessee. As his return for tending the crop he receives only his subsistence for the year. Needless to say he does not have to furnish the seed. The landlord is, in a way, his protector, and furnishes him a reasonable number of animals for sacrifice.

The amount of land leased is that which a family can tend conveniently—not more than a quarter of an acre usually. This is usually a single plot, but not necessarily so. Formerly a lessee was practically a serf in some districts. Latterly he quits leasing from one landlord and goes to another if it seems desirable to him to change. There is a premium on labor now.

In case of a dispute between landlord and tenant the usual procedure at present is for one party to make complaint to the lieutenant-governor, who is also ex-officio justice of the peace. Formerly recourse was had to a great deal of talking, bickering, tongue lashing, ordeal, and finally perhaps the lance. The lance was formerly the court of ultimate appeal in the case of difficulties that could not be settled by talk and compromise.<sup>6</sup>

#### THE VILLAGE SYSTEM

The gregariousness of all the Malay peoples of the Archipelago, as evinced by their tendency to live in villages, is less marked among the Ifugao than among any Christian tribe, and less than among any other non-Christian Malay tribe of northern Luzon except the Ilongot. However, the Ifugao does usually live in villages, but these villages rarely are composed of more than six to twelve houses. In Pindungan, in Kiangang district, one of the largest villages in the subprovince, there were living in 1909 fifty-two families.

This wider distribution of houses is due to two main causes. First, the Ifugao mode of warfare, instead of being a warfare between villages or districts, was usually a warfare between families. Ifugaos

<sup>6</sup> See Ifugao Law, *op. cit.*, pp. 92-109, for further details.

keep very strict and accurate account of kinships. Coming back from a remote village, I brought an Ifugao cabecilla with me to Kiangan. On meeting a Kiangan cabecilla the two began to figure out their relationship. They were seventh cousins. Neither had before seen the other. Most warfare in Ifugao was by ambush. Warfare was usually a series of vengeance and "returning of vengeance," as the Ifugao says, as a result of a blood feud. Vengeance was obtained usually by hiding in the runo grass along a path until a man or boy big enough to kill came along and then spearing him and running away with his head. It is obvious that against such a system of warfare, village life would offer little protection. Indeed it would on the contrary lay the inhabitants more open to danger than life nearer the fields or right among the fields, because a great many of the inhabitants of a large village would have to go a considerable distance to their fields and so expose themselves constantly. This danger is the greater inasmuch as the heavy, distributed rainfall of Ifugaoland produces a dense undergrowth which increases the danger of ambush.

Second, it may be that the Ifugao, having more labor per capita to perform on his rice fields than the others of his non-Christian brethren, desires to be near his fields so as to lose as little time as possible in reaching them.

#### CAUSE OF SIZE OF HOLDINGS

The occurrence of small holdings among the Ifugao is doubtless due to the enormous expenditure of labor necessary to construct rice terraces, and to continual division of holdings by inheritance. No man has ever been sufficiently wealthy to construct any considerable area of terraces. While certain forces have tended to gather small into large holdings, there have been others that have tended to divide large holdings.

Let us illustrate by an actual case: Guade, of Maggok district, is the only son of parents both of whom were quite wealthy, relatively speaking. He is a man of great bravery, daring, force of character, and intelligence. Ifugao social and political development has stopped short of a tribal organization but Guade's importance makes him almost a chief in his district. He makes a great deal of money every year by lending out rice in the "hungry season" (March, April, May) to be paid back, doubled, the coming harvest. He has some



hundred to two hundred hogs leased out among families of his district, and has a considerable income from this source. He is constantly increasing his holdings. He gives expensive feasts, which compensate for their expense by increasing his prestige and power.

Guade's case illustrates the typical method of accumulation of large land holdings. The reverse, the division of the estate, will come in a very few years. In the first place Guade's health may soon fail. In such a case he will sacrifice carabao upon carabao and may have to sell some of his fields to obtain them. These sacrifices will be made in order to appease the deities that have afflicted him with sickness. But in any event his children will soon be marrying. For Guade is a father. He has found three women necessary to a happy married life and has, unless I am mistaken, had children by all of them. At any rate he has wives (legitimate) and children (legitimate) galore. The Ifugao gives his children their inheritance when they "*umá-we*," that is "go separate," to live with their own wives in a house of their own. Consequently Guade's fortune, which is one not to be despised by any man of any race, will in the next ten years have been divided.

#### AGRICULTURAL LABOR

It is to be doubted if any labor anywhere could be as efficient in the kind of agriculture pursued by the Ifugao as the Ifugao's own. One sees men with large wooden paddles which, for courtesy's sake we will call spades, working all day knee deep in rice-field mud and slime, the hot sun beating on their backs with its accustomed tropical ferocity and its glare rising from the water into their faces. One sees women working under the same conditions all day, weeding the fields or planting.

The Ifugao, while probably not so large as his Christian brother, is stronger and has more endurance. He has no false ideas as to the dignity of certain forms of labor and the indignity of others. Indeed if any kind of labor be more commendable than others it is agricultural labor. Even wealthy men take their place, if they have the time, among the ranks of those who spade the fields. Cargadoring is slightly less commendable than other forms of labor, perhaps.

## THE DAILY LIVING

The vegetable food of the different classes of Ifugao varies principally in the ratio of camotes to rice in the annual subsistence. Among the wealthy, rice comprises practically the sum total of the year's food. Among the very poor it changes place with camotes.

The number of meals eaten by the Kiangnan Ifugao depends upon his status in society. If he be a rich man, he eats three meals a day the year round. If he belongs to that large class who have a few rice fields but not sufficient to furnish a supply of rice for the whole year, the *mabitil*,<sup>7</sup> he eats three meals a day at harvest time and during such time thereafter as may be sufficient to give him a good filling. From thence on, he eats two meals a day: one at about nine o'clock in the forenoon and one at about six in the evening. Whenever he has any hard work to do, however, he eats three meals. Some few there are who have no rice fields, the *nawatwat* (poverty-stricken), and who never have more than two meals a day and sometimes have only one. These unfortunates, as may be supposed, are quite fond of attending religious feasts.

The Ifugao are quite prudent in the matter of their rice supply and make a little go a long way by the use of other foods which they do not like so well. These other foods are called *hida*. The following are those most common (not including camotes, a staple):

*Vegetable*: *pihing* or *aba* (taro); *pagalot* (edible fern); *kakao* (jackfruit); *umuk* (rice sprouts, the tender end of the sprout being eaten); mustard; beans; cabbage; okra beans; *balatong*; *antak* and *itib* (small beans); sprouts of behuco and other palms; the soft sprouts of runo grass, roasted; yams; bamboo sprouts; maize.

*Animal* (in order of preference): wild hog; deer; chicken; pig; carabao; cattle; python; *dolog* (fish); snails; grasshoppers; horse; dog,<sup>8</sup> goat.

*Condiments*: salt; chile peppers; onions; garlic; sugar; chyle from the intestines of the carabo.

Clothing is a matter that does not bother the Ifugao much. The men wear clouts, the women skirts reaching from the hips almost to the knees.

The houses of the Ifugao are among the best constructed in the Philippines. While not so large as the bamboo houses of the lowlands

<sup>7</sup> *Mabitil*, from *bitil*, hunger; those who are likely to become hungry.

<sup>8</sup> A very few Ifugao in western Ifugao, neighbors of the Lepanto-Benguet Igorot, have learned from these neighbors the custom of eating dog.

commonly are, they are entirely of wood except the thatch. They are substantial, kept free from rats by an admirable device which prevents their ingress, and are kept reasonably clean. For amusements the Ifugao has the feasts which his wealthy companions give from time to time, and their accompaniments of dancing and their nights of music and song. Formerly he had a game in which life and vengeance were the stakes: head-hunting. He wishes very much that the old times would return, and that he might again enjoy the thrills of that great game.

#### THE MOBILITY OF LABOR

One would hardly expect to find a mobile labor supply among a people whose stage of culture is low, among a people who love their hills and homes as do the Ifugao. Nevertheless, within their own little world, Ifugao labor is comparatively mobile. The rice fields in the lower altitudes are the first to be planted, and the first to be harvested. There is every year a regular afflux of labor from the higher to the lower altitudes, and from the lower to the higher altitudes at planting and harvest time. Usually the laborers return to their homes each day. Men, women, and children often walk ten miles a day in going to their work, and returning home.

In addition to this movement of labor within the subprovince, there is an annual afflux of labor from the southern half of the subprovince to Nueva Vizcaya, and from western and northern Ifugao to Cervantes, Lepanto, and Baguio, the insular summer capital. Usually only the men go but sometimes their wives and even their children accompany them. They work for wages, invest their earnings in pigs and chickens, and bring the latter back home. These outgoings of labor take place at two seasons of the year: between harvest and planting, and between planting and harvest. A man rarely stays in Nueva Vizcaya longer than a month and usually rather less than two weeks. During spading time (duration about three months) and planting time (duration about three months) his services are needed in his own land. Between these periods, he cannot get a job in his own habitat.

The Ifugao has a venturesome spirit; he is not afraid to go anywhere; and takes delight in seeing strange things and new scenes. He is a remarkably keen observer. Few things that go on around him escape him. He may not remark on them at the time, but beside his own hearth he tells what he has seen. And many things that he

has seen and heard are quite to the disparagement of his Christian lowland brethren. And these are the things he likes best to tell when he comes back from *baliwan*—the land on the other side of the mountains.

#### CLASSES OF IFUGAO SOCIETY

Generally speaking, there are the following classes in Ifugao society. In the southern half of the subprovince, class lines are not drawn at all closely except in marriages. There is little or no exclusiveness. I am informed that in northern Ifugao the lines are drawn very strictly. I do not, however, believe this, but it probably is the case that class distinctions are more noteworthy there than in the Kiangnan area.

1. The *kadangyang*, the highest class in Ifugao society. A *kadangyang* is a wealthy man. There is some conception of nobility—a very faint one however—involved in the word. To be recognized as a *kadangyang*, a man must first have called together the people of his village and with their labor have hewed out a *hagabi* (lounging bench) and have given the attendant costly feast. All this costs about ₱ 500. But if he comes of a *kadangyang* family and already has a *hagabi*, he need not do this. Every one, however, before he may lay claim to being a *kadangyang*, must have given the *wyawwe* festival, costing from two to six hundred pesos. The *kadangyang* has no political authority over the others of his village. Any power that he may have results from his wealth and prestige.

*Kadangyang* among the pure Ifugao signifies about the same that the word *ilustrado*, robbed of its reference to education and enlightenment, does in the lowlands: a wealthy, influential man. The basis of wealth is rice fields.

2. The *natumok* comprise the middle class. They have enough rice, with careful husbanding, to supply them almost throughout the year, but toward the end of the agricultural year they “become hungry,” that is, run out of rice. The rice that they need for food they obtain from the *kadangyang*; but they have to pay it back double two or three months afterward at harvest time.

3. The *nawatwat* are those who have no rice fields or very small ones. The word means the very poor, the poverty-stricken. It is from this class that servants and tenants are recruited.

## SERVANTS AND SLAVES

Formerly the selling of children, or the bonding them out in payment for debt, was extremely common. Now it has almost stopped. Usually the child slave, *himbut* (Cagayan, *iripen*; Ilokano, *idipen*), was not ill-treated, it is true; but there was nothing to prohibit ill-treatment on the part of the master. When it grew up, the master sometimes stooed the expense of a marriage feast, and upon the child's marrying, made tenants of the young couple. Sometimes a child, bought as slave, became so beloved as to be adopted by a childless couple. Sometimes, too, the *himbut* managed to be successful in love affairs, having as their object a girl or boy in more prosperous circumstances. In such case, the slave's liberty was frequently purchased by the spouse.

Slavery among the Ifugao was nothing like slavery as it has existed among our own and other peoples because the gulf between slave and master was not so wide. Still it was an institution sufficiently stern for all that. The master had power of life and death over his slaves. One revered ancestor of the Kiangnan people is addressed in prayers to his ancestral spirit as "brave ancestor Ananayo (Eagle), you who speared the slave to death." The slave always remained a slave unless purchased or set free by the caprice of his master. If he married, his owner might agree to let one of his children take his place as a slave. The value of a slave was reckoned as ten carabaos or a hundred pesos.

Head-hunting was connected with slavery in this respect: by people of the Kiangnan districts, women and children (except of Silipan districts) were not killed but were taken captive and sold as slaves if not promptly ransomed. There was a large and lucrative trade in selling slaves to the Cristianos of Nueva Vizcaya and Isabela. Kiangnan, by reason of its position, had a partial monopoly of this trade, and acted as go-between between the districts in the interior, whence came most of the child slaves, and the Nueva Vizcaya people. Kiangnan attempted to keep this business in its own hands by killing any party from the remoter villages that started through its territory en route to sell slaves.

Rice fields and children alike are mortgaged by the Ifugao and in the same way. If a man finds himself under the necessity of raising some money and cannot raise it any other way, he mortgages either his rice field or a child. In such case, his property reverts to him when

he repays the money. Until then the one who lends the money uses the child as a servant; or if it be a field that was mortgaged, plants the rice field and reaps the harvest. The debt however bears no interest, as it is considered that the use of the field or the services of the child pay the interest. A child or field so bonded is called *implenda* or *nangdonan*. Both these words mean literally "was carried." Bonded servants receive much the same treatment as slaves did—perhaps their lot is a little better. Often they are treated as members of the family.

A lessee of a rice field is called *imitop*. A lessee without family who stays at the house of his landlord is called *intakon*.

Sometimes an unmarried poor person will go to the house of a rich man and voluntarily ask to be taken as a house servant, and to receive his food in return, together perhaps with a clout if the lady of the house be minded to weave him one. No heavy work is expected of such a servant. Such servants, too, are treated as members of the family. They are called *mikop*.

Orphaned relatives, *napuig*, are not considered as servants but as members of the family. They are nevertheless expected to do their share of the work.

#### EMIGRATION

The movements of emigration within the subprovince are considerable. Almost entirely they are within that branch of the tribe known as the Silipanes. To explain the reason for this, it is necessary to go back to the original immigration of the Ifugao into their present habitat.

That this migration took place a long time ago is a foregone conclusion. That it took place from Cagayan valley is almost as sure (for reasons too lengthy to set forth here). One probability in connection with immigration among all savage or barbarous peoples is that they migrate up or down water courses. That is to say, they follow the line of least resistance. Now there were two streams of immigration into Ifugao apparently: one of Silipanes by way of the Alimit river, a tributary of the Cagayan; another of the pure Ifugao branch by way of the Ibilao river, also a tributary of the Cagayan. The valley of the Ibilao is the larger and more fertile of the two. The Silipanes have almost completely reached the limit of their available cultivable rice land area. Consequently they are migrating in great numbers. Their migration is into two areas: the foothills in the

eastern part of the subprovince, and the valley of the Lamut river in the southern third of the subprovince.

The emigrants usually have a hard time of it the first two or three years. I have never seen more miserable people in any section than some of the Silipan immigrants in the foothills. However after two or three years, owing to their industry, they prosper and as a rule their condition becomes better than it was previously. Probably about three hundred people migrate each year.

## 5. ANIMAL INDUSTRY

The Ifugao does not use animals for any purpose except sacrifice and food. The former is the primary use and the latter the secondary one. The same animal answers both purposes, because the spirits use the invisible spiritual part of the animal only, leaving the flesh for human beings. An Ifugao never kills an animal except as a sacrifice. This certainly applies to all except the very wealthiest and, I suspect, even to them.

The only animals raised by the Ifugao are chickens, pigs, goats and cattle. The importance of the last two is inconsequential, of the first two, very great. The Ifugao knows every individual chicken in his flock. Thus Tadona of Kiangan, one of the great hero ancestors of the Ifugao, and even of the Benguet and Lepanto Igorots, stood over his pigs and chickens at night as they went into their coops or pens and, so the myth runs, checked them off one by one by name: "My pig Lidum (Black One), my chicken Puka (White Feathered), my pig Boyale (White Belly), my chicken Goyang (Black Feathered), my chicken Spotty, my pig Striped," and so on.

Pigs and chickens are very carefully tended. The chickens are collected every night in a sort of basket that is also a coop. The basket, with the chickens in it, is hung under the eaves of the house. They are thus safe from rats, civet cats, and thieves.

Many sows are leased out in the Kiangan district on the following terms: the lessee feeds the sow and takes half of the first litter of pigs she bears, and two of each succeeding litter.

## 6. FORESTRY

The Ifugao shows greater ingenuity and industry in his lumbering activities than in any other phase of his life save only his rice culture. His only tools are an ax not nearly so large as a lumberman's wedge, and an adze. The ax is made of a bar of iron an inch square at the end. About seven inches of this bar is cut off. One end is beaten out to a width of two or two and a half inches. The other end is tapered out until about half an inch square at the end. The ax is fixed into the handle, not the handle into the ax. The handle has to be of very tough wood and for this purpose *tabuyog* or grapefruit (*lukban*) wood is usually selected, although *galugiwan* is sometimes used. The Ifugao understands how to fell a tree in a desired direction, but having no wedges he cannot force a tree against its "lean" or weight. He can fell the tree at right angles to either.

For making house posts and timbers, trees whose heart wood is a little larger than the desired beam are selected. The sapwood is notched through at intervals varying with the character of the wood and then split off. In a tough twisted-grain *narra*, these notches have to be six or eight inches apart or sometimes a foot or eighteen inches. In straight-grained woods they may be two or three feet apart. The sapwood split off, the heart wood is roughly shaped as desired and then finished with the adze. The adze is an imported tool but its shape has been changed, the blade being bowed downward so as to cut a groove. All Ifugao timbers except boards are left furrowed longitudinally and present a pleasing finish. When a large tree is cut on a steep hillside a scaffold, *palapal*, is constructed of saplings and the trunk rolled on it. The scaffold is for the purpose of preventing the trunk rolling down the hillside when it is being worked, and to facilitate work on it. I have seen scaffolds nearly twenty feet high on the downhill side of a steep hillside.

If it be desired to make boards or joists the trunk is split. It is far from being an easy task to split a tough, gnarled *narra* trunk. It is accomplished by chopping out a longitudinal V-shaped furrow on opposite sides of the log. These furrows are deepened until they almost meet. It is then possible by the use of wooden wedges to split the log the rest of the way. By this means the toughest trunk may be split, trunks that an American woodsman would pronounce not possible to split. The halves are then hewed down into boards with



the adze. By this process from two thirds to nine tenths of the timber is wasted. However, a number of Ifugao have been taught to use rip-saws and it is to be hoped that this wasteful process will soon be superseded.

The Ifugao does not export any lumber. All that he brings from the forest is for domestic use. Some Ifugao pursue lumbering as an avocation during the idle periods of the year. Every piece of timber in an Ifugao house—and every Ifugao house is built with precisely the same frame timbers—has its conventional price.

Minor forest products, rattan and beeswax, are rapidly disappearing. None is exported.

## 7. LABOR, CAPITAL, AND MANUFACTURE

### DIVISION OF LABOR

Division of labor is not carried further than a mere beginning. Some men are highly skilled blacksmiths. Nearly all know something about blacksmithing. Some are highly skilled wood carvers, but nearly all are wood carvers for all that. Almost the only division of labor is between men and women. The following table shows the work that is done by each sex, and the work that may be done by both sexes.

TABLE 6  
DIVISION OF LABOR BETWEEN SEXES

Men	Women	Either
Spading fields (except in Kiangang area)	Basket making	Spading fields (in Kiangang area only)
Getting wood	Planting rice	Cooking
All work in wood	Care of growing rice	Harvesting
Pot burning	Weaving	Care of baby
Blacksmithing	Pot moulding	Carrying rice to granary
Rice field construction	Camote culture (in Kiangang)	Camote culture (except in Kiangang)
Basket making		

### MANUFACTURE

The only places where the manufacture of articles for sale occurs are in those districts mentioned above as being so congested as to be unable to support the population by agriculture, as explained by the Malthusian theory. They are: the Silipan districts near a market (Benaue); Benaue district and others near the headwaters of the

Alimit valley, of mixed pure Ifugao and Silipan origin; Sapao valley, a congested pure Ifugao region. In Kiangan district, where rice land is ample to support the inhabitants, there is very little manufacturing.

All manufacturing is a purely household industry. Its motive may be revealed in the following.

*The wife* (on coming home with a camote basket only half full): "Abu di gatok tako, katog!" (There are very few camotes left, alas!)

*Little girl, the father's favorite*: "Adiak pinhud mangan hi gatok. Nabayag ya maid kinuk hi hinimar" (I don't want to eat camotes. It's a long time now that I haven't eaten rice).

*The woman* (to the man): "Takon di udi-am hi gayyang, ta igatang mo hi Americano ad Banauol" (Suppose you make a spear and sell it to some American at Benaue).

*Little girl*: "Om, Ama, nabhog ak hi gatok" (Yes, father, I'm tired of camotes).

"Utbo dumduma," says the woman, "maid di gatok tako!" (And likewise, furthermore, also, our camotes are all gone!).

Thus pressed, the man of the house busies himself a day or two with his own or a borrowed blacksmith outfit, makes a spear and, in another day or two, fits it into a handle. This done, he shoulders his spear, sets out for Benaue, and offers his ware for sale.

The above illustration throws the motive of what little manufacturing the Ifugao does too prominently into the foreground, and tends to give the idea that the Ifugao is considerably lazier than he is. The purpose of the writer, however, is to show the motive that lies back of manufacturing. Nobody in Ifugao expects to get rich and nobody does get rich, through manufacturing. There are men, however, who, to a great extent, support their families by manufacturing. Nearly all the articles manufactured are curios, cloths, spears, baskets, long knives, clay pots. All are marketed by the manufacturer himself. Usually he has to seek a market. The notable exception is the clay pots. Whoever wants a pot goes to Mongayan for it.

As already stated, the cause of the location of manufacturing in special districts is the overcrowding of those districts, and lack of other means of subsistence. The only important example of the location of manufacturing to utilize special resources is in Mongayan. In that region is found potter's clay and pot-making has grown up as an industry of great importance. Another utilization of a material resource is found in the manufacture of salt from a salt spring in the Asin valley.

## CAPITAL AND INTEREST

Practically no capital is invested in manufacturing. Nearly all is in agriculture, commerce, and livestock.

In proportion to the Ifugao's wealth he does more borrowing than any other people with whom I am acquainted. Most of his borrowing has no connection with any economic principle. Instead, most of it finds its motive in his religion. Does a man get sick; is there a death in the family; does a child get married? All these events and many others are attended by a scurrying about to borrow death blankets, pigs, chickens, rice, money, and so on. Then, too, a great deal of borrowing of rice, as mentioned before, takes place in the months immediately before rice harvest, when middle class families run out of rice.

On some of these debts no interest is charged. On many of them high interest is charged. Rice loaned at any time of the year calls for double the amount at the next harvest. A pig loaned calls for two pigs of the same size or one twice as large, the next year. Money loaned bears about a hundred per cent interest a year. If not paid the first year the debt is four times as great as the principal at the end of the second or third year. It does not take long for a chicken borrowed to become a carabao owed.

Four years ago my cook's father died. He borrowed three pesos. He now owes twenty-four pesos. The man to whom he owes it says the debt may run another year when, if not otherwise paid, a rice field must pay it.

A *kadangyang* has just demanded from a rather poor family a carabao in return for two hundred bundles of rice (worth in harvest time ₱ 5; in the half-year preceding harvest, ₱ 10) borrowed five or six years previously. I asked the woman of the house what she was going to do about it. "I'm going," she said, "to Bagingi tomorrow to collect a debt that a man owes me there." "How much does he owe you?" "Forty pesos," was the reply. "And how much did you lend him in the first place?" "Five pesos."

But these debts are not paid cheerfully nor collected without great trouble. Many are not collected at all. These high rates of interest are partly insurance, for much that is loaned is lost. Ifugao society has consequently developed collectors called *monbaga*, that is to say, one who speaks, who requests, who advocates. For their greater influence, these men are usually *kadangyang*. The *monbaga* appeals

to the debtor's pride, to his fear. He cajoles. He worries him. He threatens. He exhausts his suavity and tact and every other resource. He keeps at him continually. His fee, called *lagbu*,<sup>9</sup> is large. If the debt collected be three pigs, he may take one. Sometimes his collector's commission is one half.

In the collection of debts, since these are not paid willingly, the Ifugao has recourse to his religion. In collecting a debt of two pigs, he is likely to sacrifice two or three chickens. By analogy with his human advocates, the Ifugao has a class of deities,<sup>10</sup> numbering thirty-five or forty who, when invoked by the proper feast, torment the debtor with reproaches of conscience or pride until his nights are sleepless, until he imagines his fellow-men look upon him with scorn as one who borrows but does not pay. Finally, to gain his peace, he does pay.

## 8. COMMERCE

Aside from transfer of livestock and real estate there is little domestic commerce in Ifugao. Between different sections there is almost none. Long knives, spears, pots, and salt are articles of trade between districts. Also, Sapao people (in western Ifugao) are middlemen in the purchase of the highly prized Chinese jars and gansas (gongs). This paucity of commerce arises, of course, from the paucity of manufactures and exports.

The principal foreign imports are, in order of importance: pigs, carabaos, chickens, cotton yarn, brass wire, cloth for blankets, beads, crude steel, Chinese jars, gongs, tools, cutlery, notions.

The only export is coffee.

The merchants are nearly all Cristianos from Nueva Vizcaya. There are two or three Ifugao merchants. Needless to say, these merchants reap rich profits over and above transportation costs. Formerly their profits were even greater.

The government exchange has lowered prices considerably but has not succeeded in driving away competitors.

Transportation of freight is always by two methods: pack animals (horses or carabaos) and cargadores. All articles of commerce except Chinese jars and gansas come in by way of Nueva Vizcaya, which is the most direct route to Manila. The average load carried by a

<sup>9</sup> Ifugao Law, *op. cit.*, p. 57.

<sup>10</sup> *Ibid.*, p. 114.

horse is a hundred and fifty pounds; by *cargador*, fifty pounds. From Tayug to Bayombong the charge for pack horse is ₱ 10. From Bayombong to Kiangan the charge is ₱ 4. Between the latter two points, the charge for *cargador* is ₱ 1.50, or ₱ 4.50 for a hundred and fifty pounds of freight. Transportation is, then, slightly dearer by *cargador*, but not much so. Counting official and semi-official freight brought into the country, most of the transportation is by *cargadores*. This method has the advantage of being the more expeditious.

Transportation not only increases the cost of imports by increasing their expense, delivered, but also indirectly, owing to the amount of capital needed, difficulties of the journey, and high rates of interest on the money from the time the merchant leaves Nueva Vizcaya until he returns from Manila.

#### METHODS OF EXCHANGE: BARTER

In the ancient culture of the Ifugao, barter had a large place and it still has, but not so large as formerly. Examples are: a breech-clout is frequently given ten men for ten days' labor; three or four death blankets are traded for a jar; a brass gong might be traded for a jar. As a rule, the disadvantages that apply to barter anywhere applied in the Ifugao culture, but not to so great an extent as they would apply in a higher civilization. Thus when ten men won, by a day's labor each, a clout, there was considerable difficulty in arranging equitably the ownership of it. The clout could not be divided for that would destroy its value. The difficulty was usually and is yet usually solved by one man's paying to each of the others four or two bundles of rice, according to the season, and taking the clout himself. Without money, a factory making clouts would obviously have a hard time doing business in Ifugao. In the second instance mentioned, the Ifugao who has three or four death blankets in his possession and who wants to trade them for a jar, probably has a pretty hard time finding another man who has a jar and who wants to barter it for three or four death blankets. In such a dilemma he probably sells his death blankets for a quantity of rice or a pig.

## RICE AS MONEY

Rice was and still is, to an extent, money to the Ifugao. While somewhat cumbersome, it still has more of the qualities of a perfect medium of exchange than one, at the first glance, would be ready to admit. Rice keeps indefinitely in an Ifugao granary without damage or injury. It has a regular yearly fluctuation in value, but this can be depended on as an invariable and a regular occurrence. Its value at a certain season of the year is always the same. There is a fluctuation within the year, but no fluctuation from year to year. While somewhat bulky, still, in quantities sufficient for the Ifugao's purposes, it was not excessively so. That rice was a medium of exchange and not merely used for barter is shown by the Ifugao's hesitancy to change the price of it. For although lowland rice may be worth forty centavos a ganta, rice in Kiangan still remains at half that except during the growing season, when it doubles in price.

The following is a table of rice values.

TABLE 7

## RICE AT KIANGAN AND VICINITY

Unit	Number of bundles	Unit	Value during harvest and spading ₱ .02½	Value in season of growing rice ₱ .05
1 botek	1 bundle			
5 botek	5 bundles	1 hongal	.12½	.25
4 hongal	20 bundles	1 dalan	.50	1.00
5 dalan	100 bundles	1 bongale	2.50	5.00
10 dalan	200 bundles	1 upu	5.00	10.00
4 upu	800 bundles	1 lotak	20.00	40.00
2 lotak	1600 bundles	1 gukud	40.00	80.00
10 upu	2000 bundles	1 { nabukeue pigil	50.00	100.00

TABLE 8

## VALUE OF PIGS AT BENAUE

Name	Size	Present money value ₱
Pugal	Suckling: very small	2.50
Jin bongalayan	Worth 1 bongale of rice: suckling	5.00
Bogha	Has borne 1 litter of pigs	10.00
Pikat	Medium size	15.00
Maduan upuan	Worth 2 upu of rice: large	20.00

TABLE 9  
VALUE OF PIGS AT KIANGAN

Name	Size	Present money value
Makauayyan	Size of a bamboo: small suckling	₱ 2.50
Kinlum	Small; suckling	5.00
Bogha	Bearing first litter	10.00
Pikat	Medium size	15.00
Nungakop	Bearing third litter	20.00
Nangodi	Very large	30.00

The carabao is supposed to be worth five or six *pikat* or about ₱ 75 to ₱ 90. The value of a rice field is indicated thus: "5 *pikat* and 1 *kinlum*" (about ₱ 80), "3 carabaos and 4 *pikat*" (about ₱ 300).

TABLE 10  
VALUE OF CHICKENS

Name	Rice value		Present money value
	Rice growing season	Harvest	
Mahin	1 hongol	2 hongol	25c
Maduan hongol	2 hongol	4 hongol	50
Mahin dalan	1 dalan	2 dalan	100

The rise in the price of rice from 2½c a bundle to 5c in Kiangan, and in Benaue from 2c to 7c, is sudden. There are no intermediate values. As a consequence, nearly all the rice that changes hands in the harvest and spading season does so at the beginning of the season. For if a man has held his rice until the latter part of the season, it is to his interest to hold it over into the rice-growing period, when he can get twice as much for it.

Although the value of the rice constantly increases, the price increases abruptly. And in proportion as the value of the rice increases above the price, commerce in rice decreases. This dull rice market (which is the same as "tight" money in an American or European nation) practically stops business transactions. In the Ifugao's culture this is not a bad thing; for no one has any time for business transactions during the spading season anyway. Every man and woman except the very wealthiest must be in the rice fields. After the rice is planted, there is another period of commercial activity, or trips to other provinces, and so forth. There is again a lull for the reason that the rice supply is consumed toward the last of the rice-

growing season. However, most of the buying and selling of the year is done in the three months following the rice harvest. Most of the rice which changes hands during the growing season is loaned the poor, whose supply has been exhausted, on condition that double the quantity loaned will be paid back after harvest.

#### OTHER MEDIA OF EXCHANGE

Supplementary media of exchange are pigs and carabaos. These animals are used in the purchase of real estate. All real estate values are measured by these media. Even in this day, money is not much used in real estate purchases.

Minor supplementary media of exchange are the gold neck-ornament (used among other wild tribes in northern Luzon as an earring), the amber colored glass beads, the brass gong, the rice wine jar, the death blanket. The first three—a fair sized gold ornament, a fair sized string of beads, and an ordinary brass gong—are of a value equal to a carabao. The jar ranges in value from one *pikat* to four carabaos, or even more.

The gold neck ornament and the amber colored beads have been and are the commonest medium for the payment of fines for misconduct, especially crimes against the person, as slander, gross insult, and adultery. The death blanket is a frequent medium of exchange. Its value is eight pesos. These articles are sometimes used in such a way that they are, from an economic standpoint, money, but more often they are simply bartered.

The Ifugao's monetary system was based on rice. Rice was his one universal medium of exchange. It suited the purposes of his crude civilization most admirably and he could even today get along with it almost as well as with money so far as his domestic trade is concerned. But with increasing prosperity his foreign trade grows, and he has to fall in line with the rest of the world in the use of gold and silver.

Naturally there is no dickering as to the values of those things that have served the Ifugao as money or at least not in the former standard of value: rice. In the case of pigs and chickens, there was formerly a good deal of argument as to which order the pig belonged, as to whether, for example, it was a *kinlum* or a *pikat*, the owner holding that it was a *pikat*, the prospective buyer holding that it was of



the smaller order of sizes. Like good swappers, they usually split the difference in cases of doubt. Even nowadays there is a good deal of dickering in the buying and selling of pigs. In the case of chickens there is not so much.

#### ADDENDUM

Estimated plane area of Ifugao subprovince	750.00 square miles
Estimated actual area	1212.00 square miles
Estimated cultivated area (1212 × .04)	48.50 square miles
Estimated area of rice fields (11,520 acres)	18.00 square miles
Estimated area of camote fields (17,280 acres)	27.00 square miles
Estimated area in other crops (2240 acres)	3.50 square miles

*Transmitted December 1, 1919.*

PLATE 38

RICE FIELDS, DUKLIGAN DISTRICT

An Ifugao will put a rice field wherever there is a water supply—whether it be necessary to append it to a steep cliff or to control a river.



PLATE 39

MEN'S WORK

The fields are turned with a wooden spade. The work is heavy and exhausting.



PLATE 40

WOMEN TRANSPLANTING RICE FROM SEED BED TO FIELD

The Ifugao division of labor is on the rather natural basis of giving to men the hardest work and to women the most work.



PLATE 41

THE TERMINATION OF THE CEREMONIES OF THE HARVEST FEAST

The pig is enwreathed with rice heads, *hagaga* grass, and the stick with which the pig was killed in ceremonial fashion. The "dean" of the priests sends the pig's soul to the four deity-inhabited regions, there to advocate for the mortals the miraculous increase of the rice. Its soul is then ordered to return to be reincarnated for the "children."



PLATE 42

AN IFUGAO SUGAR CANE PRESS

The press consists essentially of a pole which is made to flop up and down a distance of about six inches, striking on a short longitudinal beam as on an anvil. The pole is operated by a cord with the foot. The cane is held on the short longitudinal beam. The juice crushed out is caught in a jar.

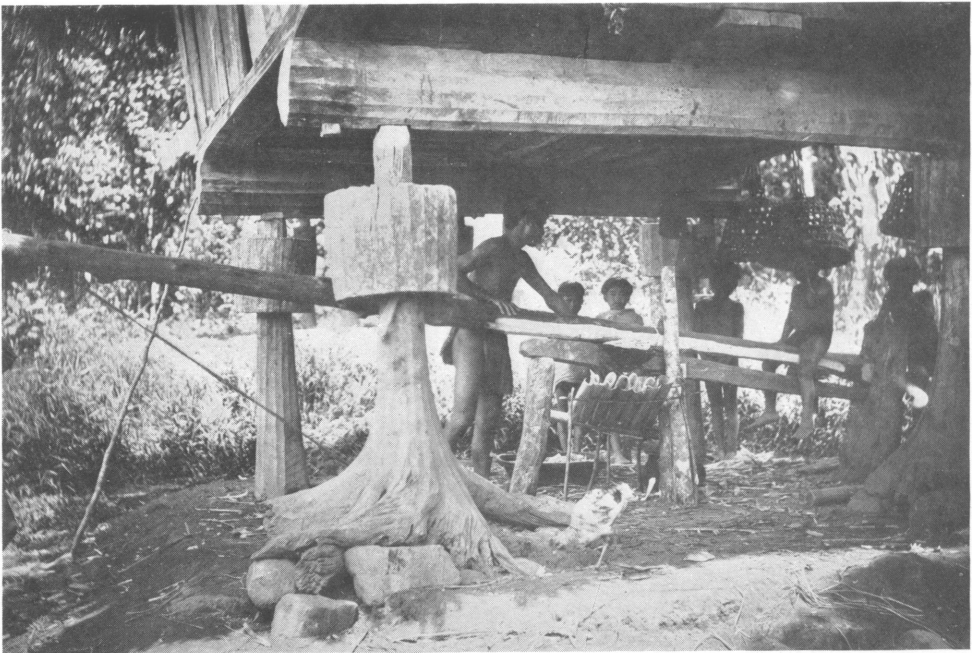


PLATE 43

FRAMEWORK OF IFUGAO HOUSE

The Ifugao house is of excellent construction. The timbers are so mortised that their very weight tends to hold the house together. No nails are used.



PLATE 44

A DAILY TASK

The rice needed for each twenty-four hours is threshed daily, usually in the evening. The adherent inner husk is pounded off in a mortar, and then winnowed in flat shallow baskets. The child, worn out by the day just ending, is sleeping while swung on its mother's back.





PLATE 45

AN IFUGAO GIRL

She is wearing the family jewelry.

