

A.

Another source of food is the rivers which wind and penetrate everywhere. Every river, creek and even small temporary stream, unless interrupted by high, unsurmountable falls of a sheer, perpendicular drop of from fifty to five hundred feet, literally teem with fish, both in actual quantity and numbers of species. Along the Highlands between Brazil and Venezuela, which culminate in Mt Roraima, close on 9000 feet high and the scene of Conan Doyle's "Lost World", only a few small fish are found in the creeks in the district, as falls with a sheer drop of as much as eight hundred feet or more (Kaitour Fall) interrupt the passage upwards of the strongest fish. Such fish, by no means common, and confined to some two or three species are probably the survivors of some earlier geological age, before these mountains, either sandstone or conglomerate, were raised from beneath the sea. The vast Amazon Forest, however, has a general elevation of little more than six hundred feet, and though practically every river abounds in falls and rapids, very trying and even dangerous to the passage of man in any kind of boat, these seldom prevent the free ascent of large numbers of fish at certain seasons. The upward migration sets in with the first rise of the rivers at the commencement of the annual rainy season. As the rivers begin to swell, countless millions in the deep pools and enormous estuaries respond to the annual urge for reproduction, and begin moving up stream towards the spawning grounds, it may be hundreds of miles up stream. Even the tiny streams that for half the year are completely dry and are generally a mere chain of pools probably half a mile apart, swarm with fish during the few weeks that they are in flood. After spawning, many of these fish descend again, especially the larger species, but many excellent fish, running to some three to eight pounds, either get trapped by the receding floods, or they find a deep hole which promises a decent home until the next spawning season arrives. It is almost inconceivable the number of good edible fish that can be caught in these holes. I have taken with a cast net from one small pool, about thirty feet in diameter and some twelve feet deep, about fifty pounds weight in fish per week for seven to ten weeks in succession.

The Indian has no cast nets of course, but there are plenty of trees in the vicinity, and in most cases a supply of poisonous lianes, with the latter of which he can kill everything in the pool in one morning. If however, the Indian comes across a pool unexpectedly with no nearby source of poison, he will cut some large branches and begin dragging them backwards and forwards across the pool. Such a pool must not be too extensive and not deeper than about waist high. The object is to stir up and agitate the deep layer of mud and sediment at the bottom of such pool, and the fishes soon find difficulty in breathing, when they move out to the shallow edges, where the water is carefully left untroubled; or they rise to the surface where less sediment is held in suspension. The women and children are posted at strategic points, armed with machettes or wooden clubs, and as a fish rises gasping, he is promptly clubbed and secured. In my early days amongst the Wapichanna, I can remember filling the pot on many occasions by such means.

With few exceptions, most of the tribes are passionately fond of fish, and this longing, together with different local conditions, has led to differences in the methods and technique of living. There is nothing more irritating and yet amusing when travelling in the high mountain ranges, where fish are rarely found, than to be with a bunch of Arecuna or Patamona Indians, when they happen to sight a small fish in some of the shallows of their crystal clear streams. Irrespective of how valuable or fragile their loads may be, down they go anyhow on the steep hill sides, and away go the carriers after the fish. I have a vivid recollection of the lurid language of a surveyor friend of mine, who, on such an occasion, saw his chronometer go bump, bump, bumping down hill until it fetched up against a boulder painfully close to the creek. The man who secures the small fish is a sort of hero for the day, and it is amusing to watch them later in camp, when after roasting the fingerling (about the average size), they share it out in tiny bits to their pals and friends, for the whole fish at best is rarely more than a couple of mouthfuls.

The Macussi tribe have enormous groves of poisonous lianes at command, and they poison fish on a scale quite beyond the capacity of

any other tribe. I have repeatedly seen them at work on a lake or pool, fully an acre in extent, and the resultant catch would in favourable circumstances run into a ton or two of fish to be divided amongst the couple of hundred families taking part. Practically all these fish are edible, although much depends on taste and necessity, as many are full of annoying side bones, or protected with a covering of armour-like scales, but nearly every tribe has some peculiar fish which only dire necessity will make them touch. The gigantic *Arapaima gigas*, running frequently to 300 or 500 lbs in weight and considered by other tribes and Brazilians in particular as a remarkably succulent fish, is the *Macussi shibboleth*. No self respecting *Macussi*, man or woman, would eat this fish, due to a belief that a number of bright red scales, about the size of pennies, which are found along the lower part of the body between the vent and the extreme tail, bear some obscure relation to the customary periods of woman, and portend some vague danger to those who eat it, either immediately, or definitely at the next union of the sexes. The same idea and principle is found amongst the *Wapichanna*, but not in the case of the *Arapaima*, which they hunt and eat with relish. Their *bête noir* is one of many varieties of *perai* or *peranha*, so numerous in every river and all of which have tremendously powerful jaws and dangerous rows of sharp, shark-like, cutting teeth, and for which every person holds a great respect on account of the amputation of toes, fingers and other mutilations when swimming or bathing in the creeks. I had a *Macussi* boy working with me, who, while bathing when a small boy, had his entire genital organs bitten off. The *peranha* in question is one known as *Tabuch*, which, around the spawning season especially, is a very bright scarlet hue along the belly and lower sides. This indicates that the genital organs of either sex, but especially the women may be cut up if its flesh is eaten, and only a few of the bravest, foolhardy, unmarried men dare eat the fish, even when hard pressed for food.

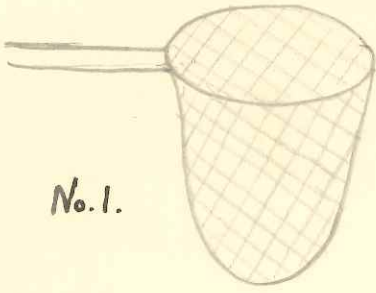
The *Wapichanna* country, surrounded by, and with equal access to a similar enormous extent of the same type of forest as the *Macussi*, possesses very few of the poisonous *haiarri* lianos, for no very

apparent reason except that the tribe are the greatest fish eaters I know, and it is probable that they exhausted the supplies long ago in satisfying their longings. On this account, the Wapichanna have developed a range of other minor poisons, far beyond that met with in any other tribe and also greater numbers of mechanical devices, traps, and other means of procuring supplies of fish. During the heavy rainy season, when every swamp and gutter is overflowing, the hook and line and the bow and arrow are the principal weapons of the fisherman of every tribe, and in the making of their iron tipped arrows, the Wapichanna surpass all the tribes in variety, design and beauty of finish.

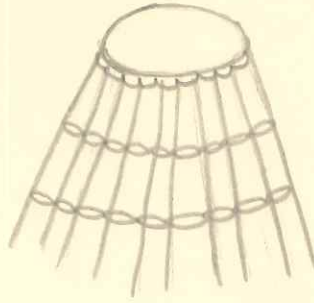
As the water recedes with the close of the rains, such fish as remain become shy and rarely take the hook unless during the night, so other means have to come into use. They weave a fine mesh net which is fitted up like an ordinary fisher's net (No.1) with which they can scoop up small fish in numbers at certain seasons, generally when congregating below certain falls while waiting for favourable water to pass. They weave a cone shaped, circular trap of straight saplings and lianes, (No.2) which they can plant down in some shallow, muddy pool, and seize any fish that may be inside by inserting the hand through the open top. They also weave a tapering trap (No.3) with long split reeds or mid rib of palms. This is used when the water flowing down the creek is reduced to very small proportions. The trap is invariably placed in some tiny, suitable fall, with a foot or so of a drop and where the water is converged into a single channel, with the open end upwards and so arranged that all the water flows into the mouth, when it is secured in position by stones and lianes. Numbers of small fish descend from pool to pool during the night, so the traps are set before sundown and are left in position all night. The traps are lifted at early dawn and the trapper may find one, three or thirty fish for his first meal of the day.

Another common form of trap in use was No.4. A ring some six inches diameter is woven from stiff lianes and finished in such a way that the free ends of the lianes meet in a loose cone, A. Around this, a basket <sup>is</sup> woven from split reeds as per B or C. Some bait is put inside and the trap anchored out in a pool all night. The

Wapichanna Traps etc.

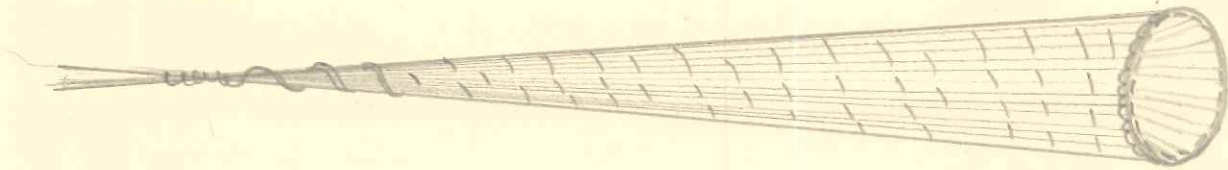


No. 1.

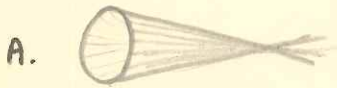


No. 2.

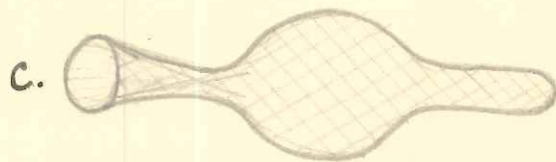
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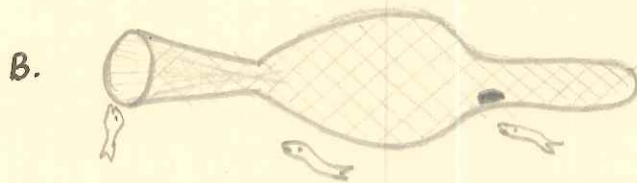
No. 4



A.



C.



B.

fish attracted by the bait inside would nose around until they found the entrance; the stiff lianes would yield sufficiently to allow the fish to pass inside, but would not allow it to get out again.

Spring reeds for fishing were common amongst the Wapichanna for night fishing after the waters had receded and left the banks of creek or lake well exposed (No. 5). Before setting out, the Indian would take a piece of a tough twig, about the thickness of a pencil and one inch or so long. This he would fit with a piece of string at each end as A, which would be secured at the proper place on his fishing line. Next he would cut a stouter sapling with a side branch which was trimmed as B, and to the straight end of which he would also fix a piece of string. He would also cut a stout straight piece of sapling about a foot long, and a long tapering supple pole to serve as a red, to the point of which he attached his line and hook. Arriving at some suitable place for fishing, he would drive his fishing red deep into the soil of the bank, close to the water; he would securely drive in the wooden peg to which he would tie B, after which all he had to do was to bait his hook and connect A. and B. properly. The fish seized the bait, released A. from B., when the red would jerk back straight and the fish was caught. The Indian may set as many spring reeds as he has hooks, and as a rule they are set at dusk to catch the larger species of fish only. I have seen a fisher bring in two or three fish in the morning weighing anything up to 20 - 30 lbs each.

In fishing with a long line at night, the Wapichanna adopt a device which allows them to sleep comfortably in their hammocks. They cut a good, wild pineapple plant or some allied species with rough jagged edged leaves. They make the plant secure with soil or rocks a few feet from their hammocks, throw the long line out just far enough, so as to leave a couple of fathoms lying coiled at their feet. They push the slightly tightened line down snugly amongst the ragged leaves of the plant and go to sleep. As the fish takes the bait and rushes off, the spare coils of line make a fairly loud, peculiar noise in passing through the leaves, at which the Indian promptly springs up and seizes the line to play his fish.

Wapichanna Traps etc.

No. 5

A.



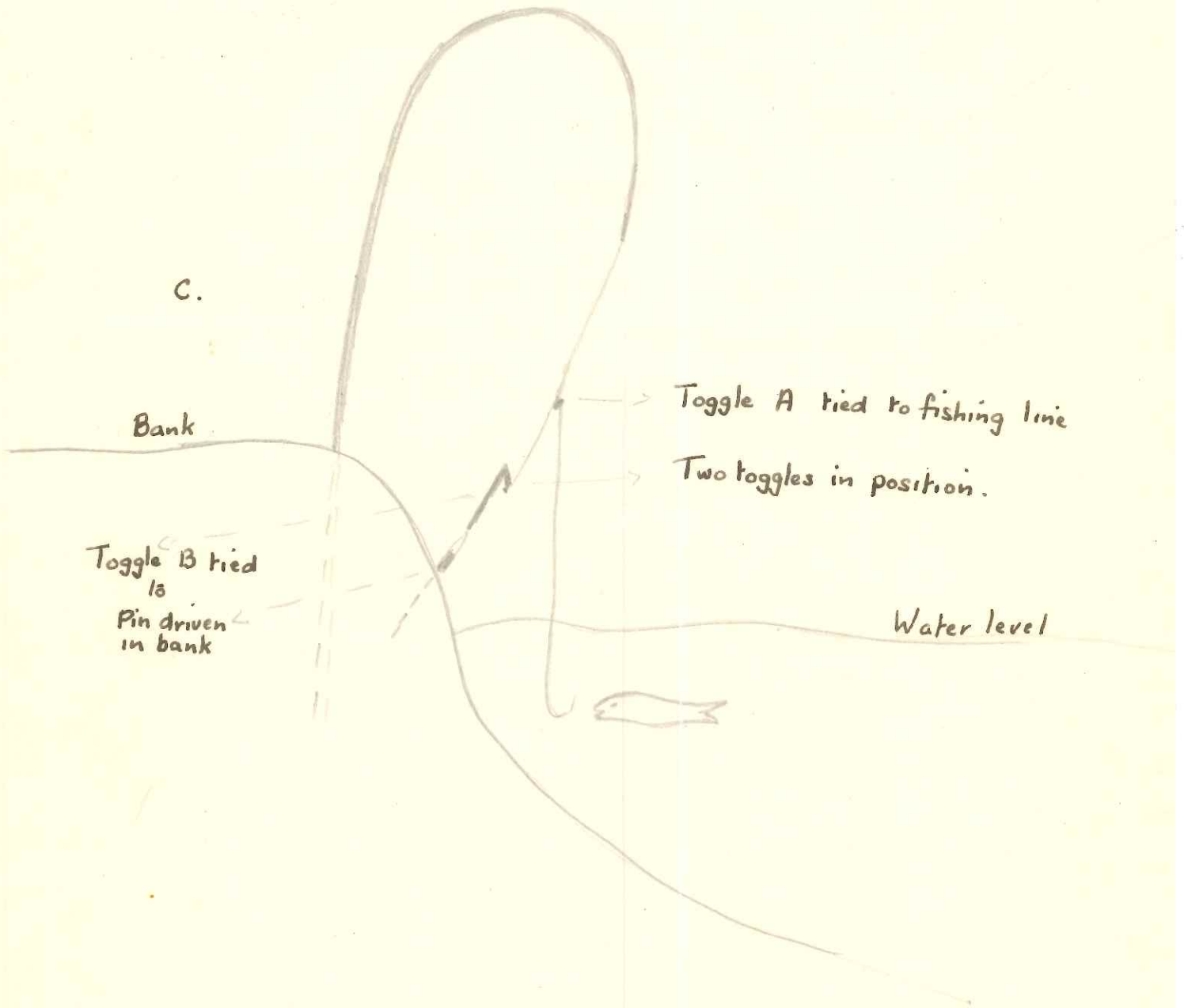
Toggle for attaching to fishing line

B.



Toggle for attaching to peg in ground.

C.



Some of the Indians tie the line to the hammoeks and the tug of the fish escaping with the bait awakens the sleeper, but in a riverside camp, someone is often moving around and every bump in the dark against the fisher's hammoek is a false alarm, as the noise making bush is preferred. Some Indians tie the line to their bodies, but this is dangerous, owing to the size of many of the huge powerful fish in these rivers. A tale is told by the Wapichanna, vouched by my river captain, who was there at the accident. Some half dozen Wapichanna Indians were travelling up river in a boat and had spent the whole day laboriously hauling their boat and cargo through a long series of very trying rapids. Night found them camping at the side of a pool famous for large fish, but they were too exhausted to do any fishing as the chances were they would sleep too soundly to hear the noise bush warning and would most likely be minus a hook and line by morning. However, one man volunteered to fish. He would sleep close to the water, so as not to disturb anyone and would secure the end of the line to his body, to be certain of being awakened if a fish took the bait. He coiled the end of the line round his neck and all went to sleep. They woke next morning to find the man's hammock empty and with no sign of either the man or the line. They hunted unsuccessfully everywhere for a whole day and reluctantly had to conclude some huge fish had taken the bait and had dragged the unhappy man into the river, where he was drowned.

I once had to render assistance to a man who was the victim of a serious fishing accident. He was fishing at night, and had attached the line by a running knot round the palm of his left hand, while doing some dish washing by the side of the creek. Suddenly there was a violent tug on the line which tightened the slip knot round the man's hand and jerked him off his feet. He was within an ace of being dragged into the creek when, yelling for help, he managed to secure a firm hold on a tree with his free hand. More than twenty men were in camp a few feet from the scene and although everyone jumped promptly to assist, before they could reach the man, the running noose had bitten into the flesh and cut through the joints at the root of all four fingers. Fortunately it was not too far from

civilization, and twenty four hours later the man was in the care of a dispenser at a mine, and his life was saved.

The Wapichanna and Macussi use remarkably short bows by comparison, and I have often thought their love of fish has been the cause. They have long known the use of guns, the old muzzle loaded by preference, which is most suitable for shooting game in the forests. This left the bow and arrow almost solely for fish shooting, which is generally done from a canoe, ~~at~~ the rocks, the open banks, or the branches overhanging the different streams and pools. The distance from the hunter to his prey is seldom more than a few feet, consequently their bows have become much shorter and less powerful than those of the forest tribes, who, not yet supplied with guns, have to rely on their bows in the forest for game, and must have a bow strong enough to drive an arrow to the top of any tree - their longest shot - where birds and monkeys generally feed.

The Taruma live along the banks of a large river which at no time ever goes dry and which carries amazing numbers of fish everywhere, and as the tribe lives largely on fish, they have developed their own technique in fishing. They are equally as expert as any other tribe with the bow and arrow, but depend far more on the hook and line to secure supplies. They have developed lures to a wonderful extent using the leaves, flowers or fruit of countless bushes and trees. A Taruma will ask you what kind of fish you would care to eat. He will go off with a particular bait for that fish, and by noon will return with a long string of the fish asked for and not a single one of any other variety. No other Indians of my acquaintance are such expert fishers, and as all such fishing must be done from a corial they are the most expert canoeists I know of. Each fisher goes out alone and may paddle and drift for a mile or two, sitting perched up in the bow, his rod in the one hand, a paddle in the other and never for one moment is the corial allowed to sway more than a few inches from the true line of direction. It sounds easy, but actually is exceedingly difficult and try as I liked, I never could acquire the knack, nor could my Wapichanna carriers when they tried it.

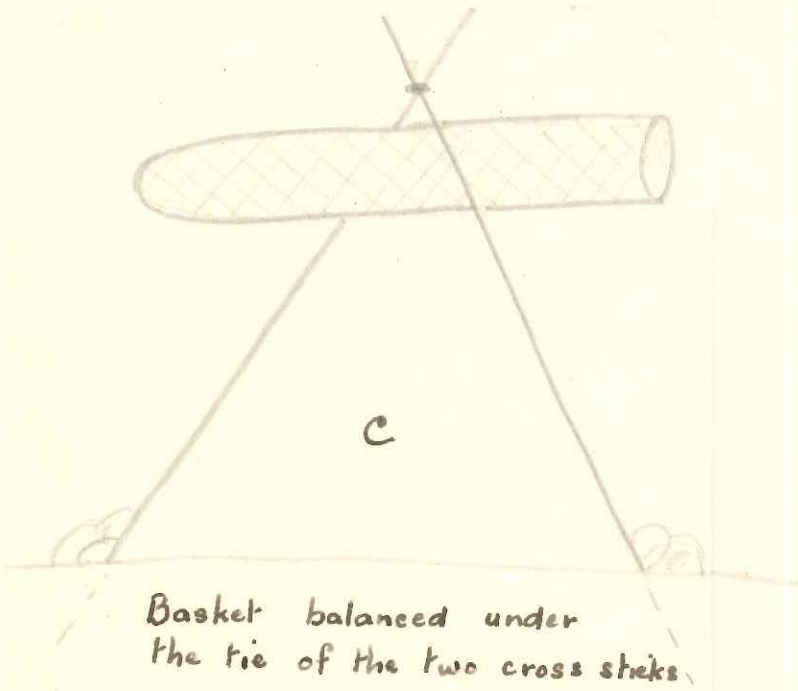
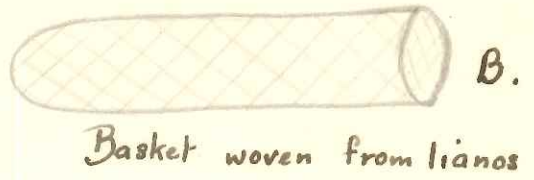
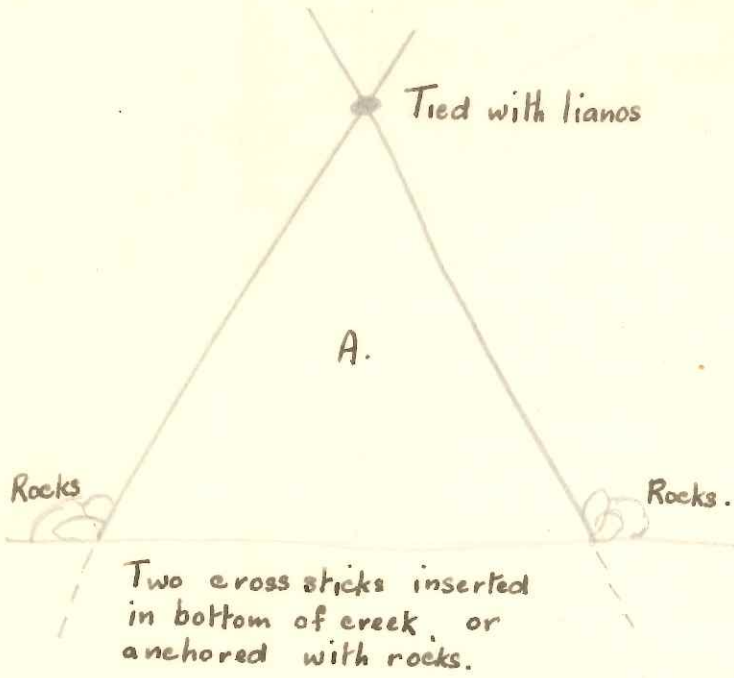
The Waiwai eat fish fairly commonly, but do not have the passionate longing displayed by most tribes. I have staged a

poisoning match with them, but they seemed quite indifferent to its success or otherwise and didn't even offer to collect many of the small varieties of fish. They only do a little hook and line fishing for the large Haimara, which every tribe loves. Probably this indifference is due to the lie of their territory, a cul-de-sac, where their large river enters a high mountain range and into which hordes of game unwittingly drift from the enormous plains lower down country, and of which there is generally a supply ample for all needs.

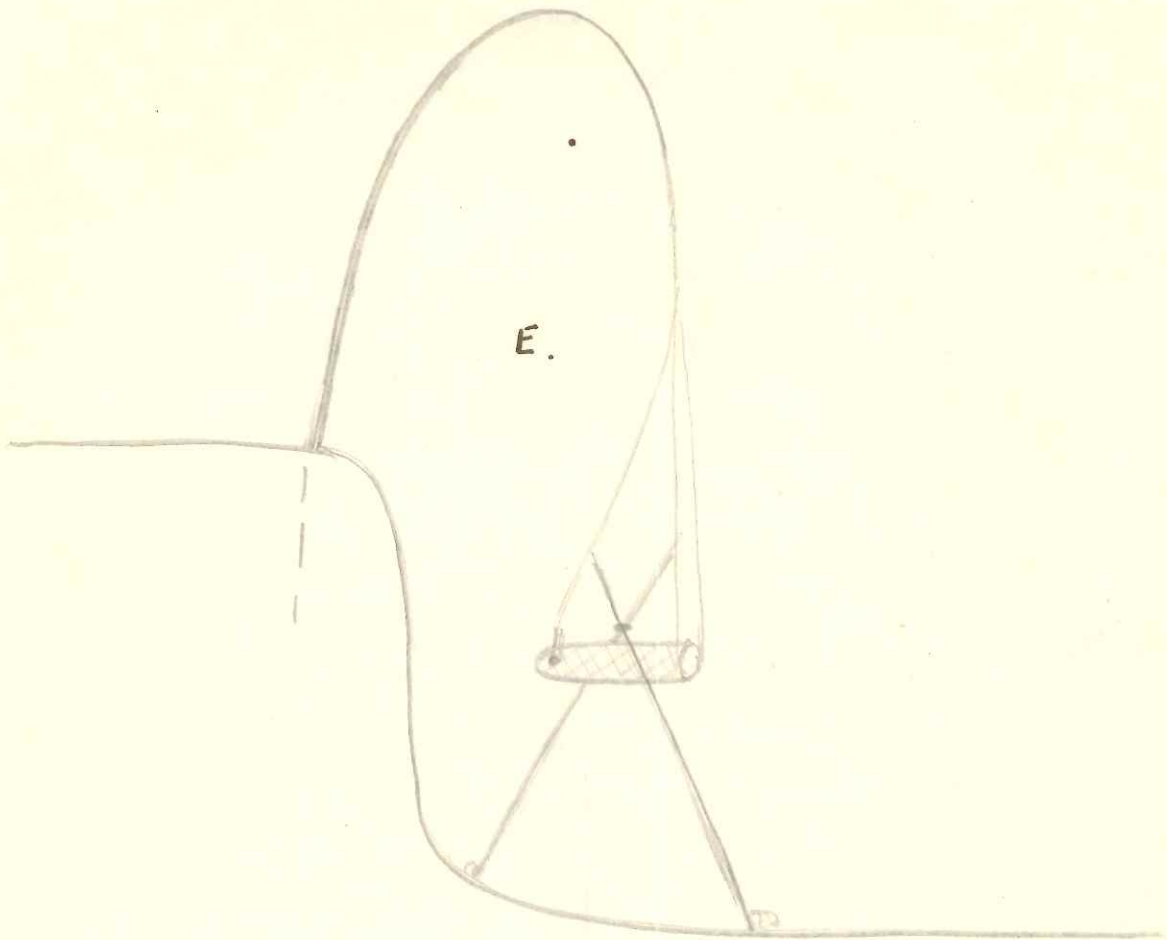
The Mapidien tribe eat fish but are almost as indifferent as the Waiwai. The Chikena tribe, who live a long way East of the Waiwai are again passionately fond of fish and as they have practically no trade with the outside world, although they know what hooks are, they very rarely possess one. They have, however, developed their own method of fishing from natural sources within their reach. They make hooks from various bones of game, and also from thorns and slivers of wood, but by far their most successful method is by means of a spring rod (No.6). When the creeks are fairly dry, they fix, either by driving into the river bottom or anchoring with stones at various selected spots, two sticks in the form of a cross, A. At home they have a number of long woven baskets, B, and as soon as the river shows a rise, and a possibility of some of these cross sticks being completely submerged, they set out to place their spring rods. The rod is driven safely into the bank as with the Wapichanna, but three strings are attached to its end instead of one. The basket mouth facing down stream is now carefully balanced under the liano tie of the cross sticks. Across the inside of the basket, near the closed end, a piece of bait is attached to an easily broken young liano, and the liano ends passed outside to be tied in a knot above, D. The spring rod is now pulled down, and the two principal lines are attached to each side of the open mouth of the basket; the other is tied to the liano carrying the bait, E, and the trap is completed. With the rising river, fish begin moving up stream, scent the bait, and enter the open mouth of the basket, F. It seizes the bait, snaps the thin brittle vine

K.  
Chikena Fishing Basket

No. 6

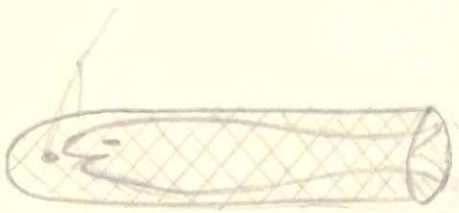


No. 6. continued

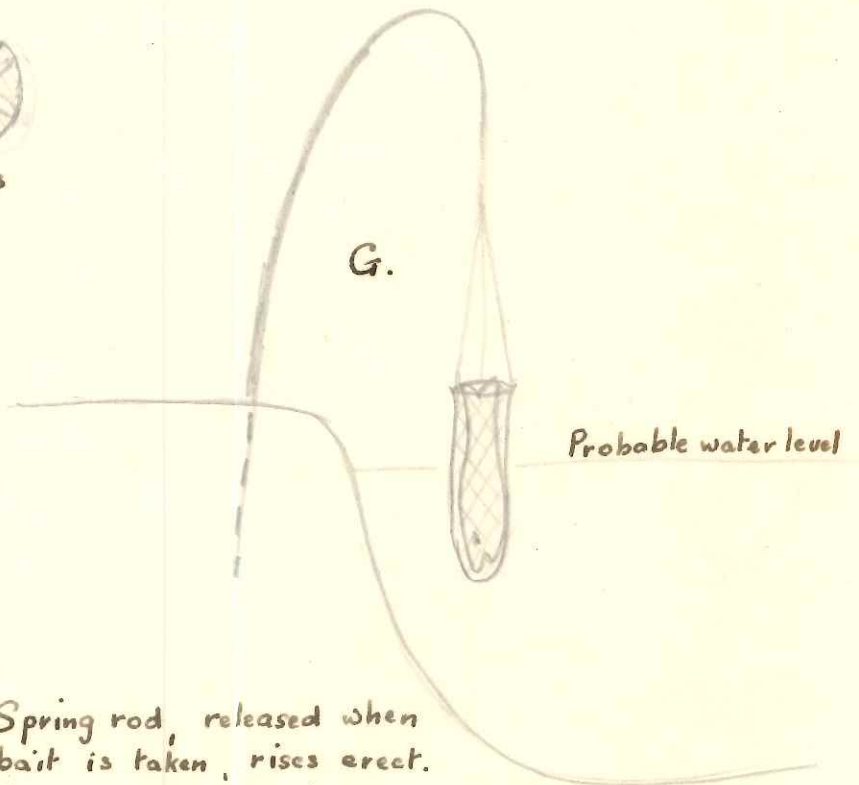


E.

F.



Fish seizes bait & snaps brittle liano



G.

Probable water level

Spring rod, released when bait is taken, rises erect. Basket is held upright, & fish cannot escape even if still under water.

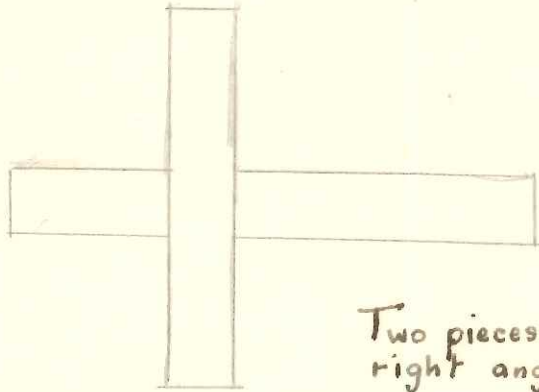
which immediately releases the spring rod, and the basket is jerked up in the air and the fish imprisoned, G. As many as a dozen of these spring baskets may be set, and I have seen a 30 lbs Haimara caught in one which was so heavy that the spring rod could only keep the mouth of the basket level with the water, but the fish of course was helplessly wedged in the bottom of the basket and escape was impossible. For small fish, the Chikena used a small bark box (No.7) by using two strips of bark about two feet and two feet six inches long respectively. Laid at right angles, A., the four ends are bent up on each other to make a box, B. The long projecting end of the longer bark has a partial cut made, but not so deep as to injure the cambium, which acts as a hinge. The trap is baited and set with a small spring rod in a swamp. The fish enters, seizes the bait, and the projecting flap is closed by the spring rod, and the fish secured.

The Trombetas abounds with great numbers of Electric Eels, and in a visit to the Kumayena tribe, I found they were exceedingly fond of this fish as food. They went out in their corials and would drift along the river, bow and arrow at the ready for the appearance of an eel, which has the habit of coming to the surface periodically for air. These eels rarely rise to the surface in the open, but take advantage of any floating leaf so as to rise underneath and be less visible to enemies. I have seen the Indians release a few large, dead leaves on the surface of a good spot and quietly follow them till an eel popped up from below, when he was promptly transfixed by an arrow. When shot, the eel was lifted by the arrow into the boat and clubbed to death. I have seen a boat of Indians shoot a dozen in an hour, and what surprised me was the casual way the hunters handled their catch. These eels can give a definitely painful, if not dangerous shock, at all times, yet the Kumayena handled them as if they were so many potatoes, without fear and as far as I could see, without inconvenience or pain.

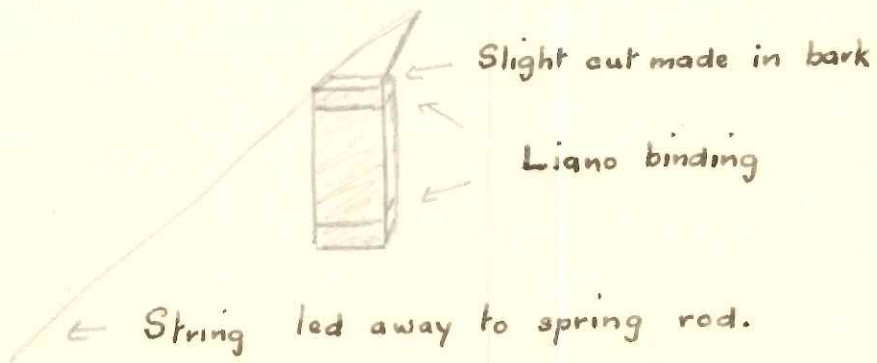
Most people jump at the sudden sharp shock of electricity such as when you touch the sparking plug of an internal combustion engine, yet I had an Indian who could hold a sparking plug till the

Chikena trap for small fish.

No 7.



Two pieces of bark at right angles, bent to form box.



cows come home without even feeling it, as he repeatedly assured me, unless that it felt hot to the touch. We tried all manner of tests on that boy ~~when~~<sup>even</sup> when he was unaware of what we were doing, and I never once saw him bat an eyelid. I am quite certain that that boy did not feel anything, and the Kumayena may be the same with electric eels, although all other Indians of my acquaintance are thoroughly afraid of them and give them a wide berth on every occasion.

Fish, however numerous, can not be relied on for a steady supply at short notice for the varying needs of any family or tribe. There are times when they have a surfeit, and numbers go bad and putrid through lack of facilities and means for curing, but there are times when for weeks together during the dry season, no fish can be caught except at an almost prohibitive cost of time and patience.