

Japanese with Dreams

Mountaineering Conservationist Brings Electricity to Himalayas

Destruction of natural resources is a serious problem in Nepal. It is said that Nepal's vegetation has been reduced by half in the past thirty years. Many alpine plants and much forest have been destroyed as local people and, increasingly, mountaineers use this vegetation for fuel. Troubled by this situation, a Japanese alpinist made a tiny hand-made water-power generation device unaided, and succeeded in producing electric light in a small village in the Annapurna region, which was the first such light in the history of the village.

This alpinist is Katsuyuki Hayashi (36), who lives in the mountainous prefecture of Nagano. Because he has loved mountains since his childhood, he decided to work in the mountains immediately after he graduated school.

When he had a chance to go to Nepal four years ago, Hayashi was fascinated by the breathtaking beauty of the Himalaya mountains, as has been each alpinist before him. The sight of the Inner Sanctuary of Annapurna, in particular, inspired him to wish he could live in such a majestic place for the rest of his life. In fact, he built a small temporary hut where he could spend his winters, returning to Japan in the summers to earn money. Had Hayashi not encountered in Nepal a situation problematic to both Himalayan alpinists and Nepal residents, he might have remained a mere nature-

lover. Witnessing the destruction of the Himalayan forest, however, changed his concern from the treatment of mountain sickness to the generation of electric light in a village. He said he was very much surprised and discouraged to find that some forests which he had previously enjoyed viewing had disappeared by the time he made his third visit to Nepal. Hayashi added, "I understood that the Nepalese people can't afford to buy oil for household energy. They have to depend upon firewood in order to survive, because Nepal is a non-oil-producing and not completely industrialized country depending on wood."



Katsuyuki Hayashi reads an encouraging letter from abroad in his room, which is crowded with books, mountaineering equipment, and tools for his experiments. He intends to organize a "We Love the Himalayas" group; to this end, he invites wisdoms

lover or an alpinist. As the kind of man who feels compelled to help people and nature, however, Hayashi responded to the destruction of nature he saw about him by introducing an important conservation measure.

Hayashi's motive for attempting to make a hydro-electric power device was not originally that of producing electric light in a village. He said, "I was going to build a cottage with oxygen supply equipment for the purpose of treating mountain sickness. When I first traveled around the Everest mountains, I myself had a headache for about a week. I once saw a Japanese alpinist die from mountain sickness during my travel. When I saw the amount of snow in the Himalaya mountains, the idea came to mind that oxygen can be produced from water by electrolysis, and then electricity can be generated by hydro-power." Since he

utilized country, depending on very expensive imported oil. Of course, part of the fault lies with many foreign alpinists, including myself, who use firewood as their sole source of energy." Though the Nepalese government has begun to prohibit the use of raw wood as firewood, Hayashi said, the measure has in fact contributed to heightening the value of wood. He believes that in order to guarantee a continuing energy supply to the residents, a cheap alternative energy must be provided to them.

Hayashi stayed at Chhomorong during last winter, dedicating himself to electric generation in the village. Chhomorong is a small village with a population of only 500; it is located about 40km north of Pokhara, which is famous for its excellent observation platform of the Himalayas. Hayashi lacks the millions of dollars necessary to donate large, systematic water-generation

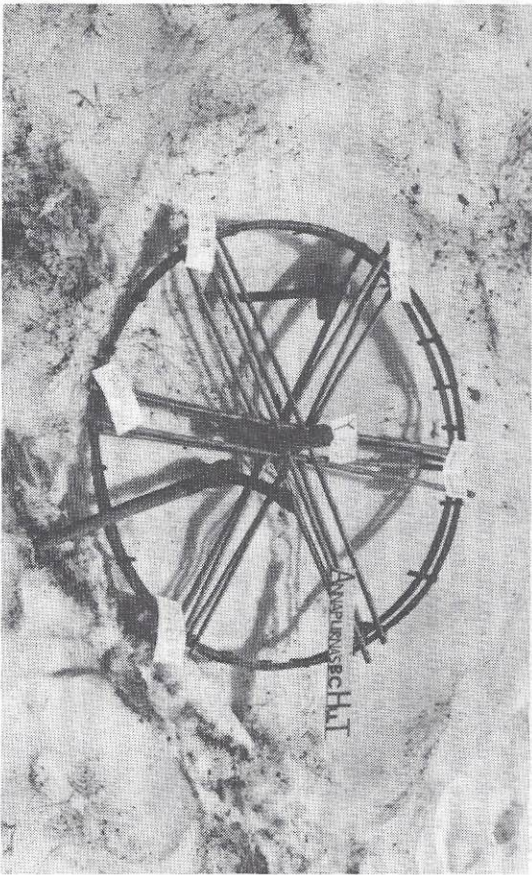
equipment or hire skilled Japanese engineers. However, he studied the system behind electric generation and made, unaided, a water wheel for this purpose. Timber, used cans, used batteries, and similar items were used in the creation. All the materials and tools were either hand-made or cheaply procured.

Though there are many villages in Nepal where no electricity is provided, Hayashi chose Chhomorong simply because he has a Nepalese friend living in the village. This sort of cooperation cannot be achieved simply through help from the Nepalese government. The government tries to avoid partially or favoritism among the various villages, so it cannot cooperate with a major improvement program in a specific village. In fact, the villagers in Chhomorong had applied to the Japanese government for the introduction of hydro-electricity. Yet their petition was politely refused because their application was not made on a governmental basis. Despite their pressing need, they had to rely upon the volunteer efforts of an individual, Hayashi, in order to have that need met.

Ultimately, in March of this year, Hayashi succeeded in generating 1kw of electricity, taking advantage of the melting glaciers. This was enough energy to illuminate a light bulb at a brightness slightly greater than that of candle light. About twenty of the villagers who witnessed Hayashi's experiment raised a shout of joy at the result. He would have liked to remain in Chhomorong until he could generate electricity of stronger kilowattage, but had to return to Japan to earn money for the production of a bigger-scale device. Hayashi's memory of the villagers' joyful faces at the sight of his electric light has motivated him to save since this April towards the travel and material expenses of his next trip to Chhomorong. He reaffirms his determination to generate at least 10 kw of electricity, and perhaps eventually enough to light up all the houses in Chhomorong during this coming winter.

A new wave of science will thus be brought into Chhomorong by the hand of Hayashi. He confesses, however, that he sometimes worries whether or not his innovations will benefit the Nepalese people. In other words, he is afraid of the negative ramifications of scientific progress for this small village. To Hayashi, the type of man who lives by the maxim, "Love nature, follow nature and its favors," his implementation of science seems somehow in contradiction to the Himalaya's basic nature. Hayashi does think that as long as his top priority remains the benefit of nature and the Nepalese people, and as long as he does not expect personal profit from his work in Nepal, his use of science will positively contribute to both the conservation of the magnificent Himalayan mountains and the greater good of the Nepalese people.

He is modest enough to regard himself as a mere sower of seed in the process of bringing electricity to Nepal. In this sense, he hopes more people worldwide will sympathize with his work. Anyone in any field, he feels, could benefit the cause through cooperative effort. Hayashi will go back to Nepal this October, hoping his work will preserve the beauty of the Himalaya mountains, which he thinks of as an international park.



Hayashi's first wind wheel device for generating electricity

from all over the world.