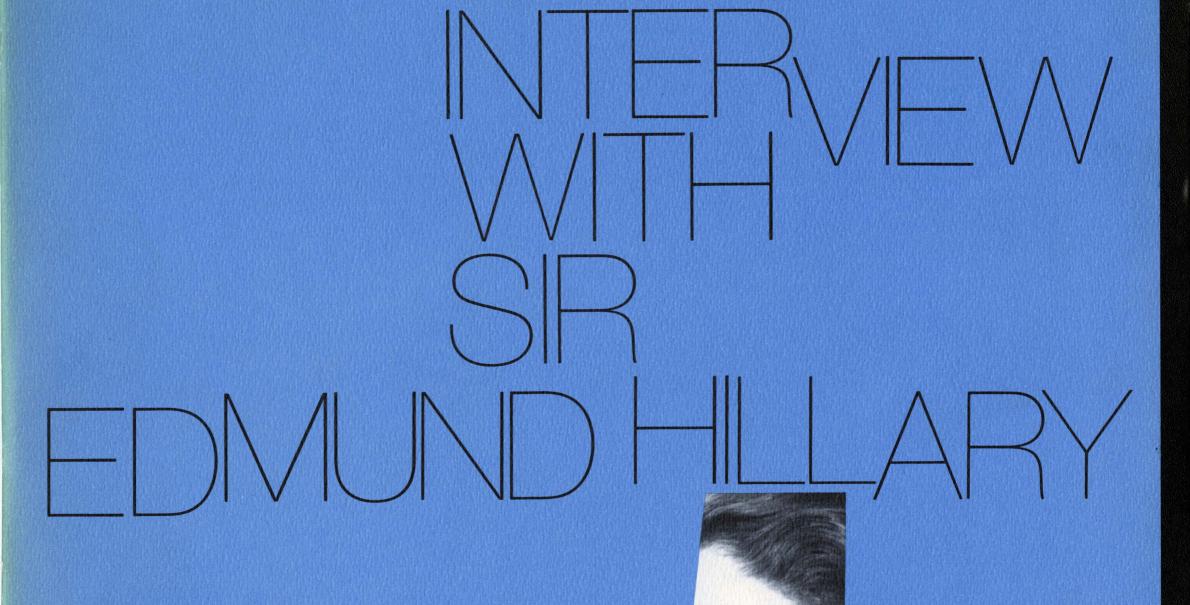
FOLKWAYS RECORDS FX 6102



MOUNTAIN
CLIMBING

# FOLKWAYS RECORDS FX 6102

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# PRODUCED BY HOWARD LANGER

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FOLKWAYS RECORDS FX 6102

# INTERVIEW WITH SIR EDMUND HILLARY — MOUNTAIN CLIMBING

Band 1.

Interview with Sir Edmund Hillary Produced by Howard Langer

Introduction:

Why does a man choose to climb mountains? What kind of challenges does he meet? What dangers does he face? What is it like to climb the highest mountain peak in the world?

This is Howard Langer in New York.

In a few moments, we will be asking these questions of Sir Edmund Hillary, the first man to reach the summit of Mount Everest.

Sir Edmund was born in 1919, in Auckland, New Zealand. He was 16 before he saw his first mountain. It was the winter of 1935, when he joined a school skiing party to a New Zealand volcano. After attending the university for two years, Edmund settled down to help out in his father's beekeeping business.

The turning point in his life came at the age of 20. He was visiting a tourist resort in New Zealand's Southern Alps when he saw two young mountain climbers just after they had climbed Mt. Cook. Next day, led by a guide, Edmund Hillary climbed his first mountain.

Back home, he read everything he could lay his hands on having to do with mountaineering. After a while, he had established a reputation as a skillful climber. In 1950, he joined a group of New Zealanders under Eric Shipton in an attempt to scale Mt. Everest in the Himalayas. The attempt failed.

In 1953, under the leadership of John Hunt, the expedition tried again. On May 29, 1953, Ed Hillary and his Sherpa guide, Tenzing Norgay, reached the 29,000 foot summit of Mt. Everest.

Band 2.

INTERVIEW WITH SIR EDMUND HILLARY

MR. LANGER: Sir Edmund, why do you climb mountains?

SIR EDMUND: I think I mainly climb mountains because I get a great deal of enjoyment out of it. I never attempt to analyze this thing too thoroughly, but I think that all mountaineers do get a great deal of satisfaction out of overcoming some challenge which they think is very difficult for them, or which perhaps may be a little dangerous.

I think that the fact that something has a spice of danger about it can often add to its attraction, and to its fascination.

MR. LANGER: What are some of these dangers that specifically face mountain climbers?

SIR EDMUND: I don't think that actually out in the mountains we are thinking exclusively of the dangers involved. But of course, if you're climbing a difficult mountain, the consciousness of the dangers has to be ever present in your mind if you're to succeed -- or survive. The dangers -- I think the first danger one has to realize are the weaknesses in one's own personality, or in one's own technique. Very often, it's a bit of a problem with young climbers; when you're learning to climb, you tend perhaps to be overconfident in your own abilities, and are not really technically capable of meeting the emergencies that may well arise.

This is a problem of course that only time and experience will overcome.

Apart from the personal weaknesses there are the problems of just sheer steepness, for instance, on either rock or snow. Then you have all the problems involved in the objective dangers of ice falling down from above, rockfall, avalanche, crevass danger, and all these sorts of things.

MR. IANGER: You mentioned the personal qualities of a mountain climber; what would you say are the outstanding characteristics of a good mountaineer?

SIR EDMUND: I think that a good mountaineer is usually a sensible mountaineer. He's a man that realizes the dangers and difficulties involved, but, due to his experience and his technical skill, he's able to tackle them calmly, with confidence. And yet, you know the really good mountaineers that I know never lose that sense of enthusiasm, that motivated them when they first started.

I think the really good mountaineer is the man with the technical ability of the professional, and with the enthusiasm and freshness of approach of the amateur.

MR. LANGER: OK. Now, suppose that I was going mountain climbing tomorrow, and I came to you and I said, "Sir Edmund, I'm going mountain climbing tomorrow." What kind of equipment would you recommend that I take along?

SIR EDMUND: If you're going mountain climbing tomorrow for the first time, I think the first thing that I would suggest was that you got in touch with an alpine club, or something, and went out with some people who knew something about the game.

SIR EDMUND: But as far as equipment is concerned, it depends a lot on where you're going. If you're going to climb in an Alpine-type region -- mountains up to, say, 12,000 feet or so, -- the type of equipment required in the summer time is very -- is much essentially the same as one would use skiing or tramping, or something of that nature. Just -- not too much expensive gear,

but good, solid windproof and warm woolen type of equipment.

But of course, in the high mountains, there the need for efficient equipment is of prime importance, and not only does the equipment have to be efficient, but it has to be very light. Because everything that goes into these regions is carried on men's backs, and weight is all important. For that reason, all of our equipment tends to be extremely expensive, made of very high quality materials. It's very fine, light — and expensive.

MR. LANGER: What about special shoes, or other special kinds of equipment. What would be required?

SIR EDMUND: For really cold temperatures operation, we use, still, a great deal of down equipment -- goose down or eider down equipment, which is still the warmest insulation that is available. We use down jackets, down trousers, down gloves, and of course down sleeping bags. And these are very effective at keeping you warm under really cold conditions. Boots are always something of a problem. I suppose people are more prone to get frostbite in the feet than anywhere else. It's much easier to keep the body warm than it is to keep your extremities warm. As far as ordinary Alpine-type climbing, we normally use a leather-type boot with a rubber sole -- a bit sort of corrugated-type rubber sole, which gets a good grip on both on rock, and on snow. But for really high altitude operations, the boots are very much more elaborate. Normally you will have a series of boots -- perhaps first of all you'll wear several pairs of woolen socks; then you'd have perhaps a felt overboot, with insulation; and on the outside another boot either made of reindeer skin or of very light leather with a vapour barrier area in between, to trap air and give you insulation that way.

There are a number of designs of what we refer to as "high altitude boots", but by no means has the final word been said on this subject. There's still a great deal of development work to be done on producing a really efficient general purpose cold-weather boot.

 $\ensuremath{\mathsf{MR}}\xspace$  . LANGER: What about things like rope, and that sort of thing?

SIR EDMUND: In the old days, we used to use all types of ropes; manila was the most commonly used rope for climbing. It's still a very good rope. But of course nowadays we use almost exclusively a nylon, or similar, artificial fibres. Although this is very thin, and it's not quite so easy to hold on to in your hand, because it's slippery. It's much lighter for the same strength; it's got a great deal of spring in it which is an advantage if somebody falls off, and of course it's got some very hard-wearing properties. We use nylon ropes a great deal.

All of our equipment has sort of developed over the years, even such things as ice axes -- which I suppose are the most, or the piece of equipment the mountaineer always has with him. With this axe -- he can use it as a walking stick (just as an Alpine stock) -- or he can cut steps in snow, or cut steps in ice with it, or he can jam it into the snow or push it into a crack as a belay around which you can put a loop of the rope and protect your companions. And the ice axe really is like another arm to the mountaineer.

MR.IANGER: Are there any rules that a mountaineer must follow? I mean -- in other words, again, if I were going out tomorrow, would you give me any strict rules to follow that I must do this, or I must never do that?

SIR EDMUND: I suppose you could do this in two ways: in order for you to enjoy your mountain-

eering and to survive at it, I think, and not to come to any harm, it's always advisable to take advantage of the experience and the techniques that have been developed over the years by experienced mountaineers. If you don't observe these generally used rules and regulations, you may get away with it perfectly well, (perhaps) all your life. But there is a very strong chance that you may get into trouble. Not only that, but I think that nobody can start from scratch and hope to achieve the technical ability of people who've been benefitting from all the knowledge that has been gained over the many years of mountaineering. The standard of mountaineering, for instance, has improved enormously, even over the last 20 years. Things are being climbed now that were just not even being considered to be climbed 20 years ago.

So I think the first thing is for anybody to get the basic standards and basic approach to climbing; the methods that are used to insure that not only do you overcome difficult climbs, but that you do it safely and well.

And there are certain rules. Even the use of the rope. Effective use of the rope in protecting yourself and your companions, the proper way to drive in a steel spike into the rock so that it will hold, and you can rely on it; the way to cut steps so that when you step on them the step will remain firm and not just break away -- these are all things that have been learned over many years of mountaineering. And these are the things that it's advisable for a young climber to learn how to do from somebody else who's already reasonably competent at them.

As far as the -- well, I suppose the "Morale" of mountaineering are concerned, I suppose most of these apply to the same as ordinary every-day things. If you're traveling through a country where a man has a farm, you observe the ordinary little decencies of closing gates after you've opened them, of not annoying or damaging stock of any sort. Even if you're short of food, you don't shoot some farmer's cattle for food unless you're really in a critical situation. And then if you do, the first thing that you do is to advise the farmer accordingly. In just observing all the ordinary, common, decent approach to life, you find, in general, that you get on so much better with the people who live in these regions, and who make their living there.

And these are very important factors. There are other questions, of course, of when you're operating in mountain huts with other mountaineers; when you are even operating on a mountain on which other men are climbing -- it's in a way, a sort of vast brotherhood of mountaineers, I believe -and you take very great care that you don't spoil the mountain for other people. Even this business of leaving rubbish around the place is one that people can be careful with even on a big mountain. And, of course, if there are other men on the mountain, you must be careful that you don't -aren't careless in kicking rocks around which may shoot down hundreds of feet and injure somebody else. Even a small rock, which you've just carelessly thrown away, when it's gained a certain amount of impetus from a fall of several hundred feet, can end up by seriously injuring someone underneath.

Band 3.

MR. LANGER: Let's take the Everest Expedition itself. How do you go about climbing a mountain like Everest? Who pays for it, who finances the trip, and who decides how many people ought to go, and so on.

SIR EDMUND: This varies of course from country to country and from expedition to

expedition. The 1953 Everest Expedition was organized by a combined committee of the Royal Geographical Society and the Alpine Club in London, in England. And these two very august bodies formed a committee composed mainly of experienced mountaineers, and this committee's job was to immediately organize the necessary funds for such an expedition.

The sources of funds for this expedition are generally speaking such things as the sale of book rights, of press rights for the expedition, the sale of film on the expedition, the book rights, press rights, film, articles and all that type of thing. They are the more or less traditional source of aid for expeditions.

As well as that, it is sometimes possible to get commercial concerns to supply you with equipment with the understanding that the fact that they supplied you may be used in advertising.

I would just suggest a word in this respect: on most of our expeditions, we do get equipment from companies who Iater use us as part of their advertising campaign. But I do think it's important that the approach to these companies should be on the basis that what they've got is what you want, initially, and then that the advertising part of it is secondary. It's most unwise to sort of get second grade equipment, and permit this to be used advertising that your expedition has used this stuff.

Always try to get the equipment you want -that should be the first requisite, that this
stuff is first grade before you let yourself be
involved in advertising it. But that is one of
the few ways that expeditions have of getting
assistance. All they have to sell are the press
and publicity rights, and the fact that they have
thought that some equipment is suitable to be used
on their expeditions.

Side II

MR. LANGER: How many men took part in the 1953 Everest Expedition?

SIR EDMUND: On this expedition we had altogether 13 western members of the expedition, and then we had, I think, about 30 permanent high-altitude sherpas -- these are men who will be carrying loads to high altitudes for us, and who are all hardy, efficient performers. So then, altogether some 600 loads were carried into the Mt. Everest region on the backs on Nepalese porters, so we had 600 men who actually carried loads for 17 days, across country into our climbing region. So, altogether, I suppose you could say that almost 700 men were involved in one way or another.

MR. LANGER: So it was kind of a team expedition, wasn't it?

SIR EDMUND: It is a team expedition, and it's very much in the form of a pyramid of effort. It starts with 600 porters at the bottom, and ends up by getting just two men out of the whole team to the top of the mountain. But, despite that, of course, the two men can't take the credit for the climb; it's essentially an effort by all the men in the party. The two men who reach the summit are completely dependent on the combined effort of all those involved lower down.

MR. LANGER: Now, as you go up the summit, you stop along the way at various camps. What is the reason for that?

SIR EDMUND: Well, of course, the difficulties on a mountain like Mt. Everest are considerable difficulties of terrain. But it's also influenced by the fact that we are going to spend quite a long time on the mountain, and it's going to take us a considerable period to relay supplies up to the higher camps, so that we can establish the route further on. So, as I say, we have this pyramid of effort. You start at base camp at the bottom, where you have most of your supplies that you want higher on the mountain. You establish another camp say 1000 or 1500 feet further up, through difficult country, and then you relay supplies up to that camp -- not only for that camp, of course, but for all the camps that are going to be above it. And by following this means, you are relaying large quantities of supplies from camp to camp; the further the camp, the less the stuff that has to go through it. Until finally, in Camp 9, as we called it --which was established at 27,900 feet, we only carried up there 150 lbs. of supplies, and that included tent, food oxygen and our personal gear.

MR. LANCER: Now, who made the decision about who was to climb up to the top?

SIR EDMUND: When we started on the expedition, you know, there was no decision to be made at all as to whom was going to do what. That's one of the misconceptions people have. You start out on an expedition with a group of men, all of whom are experienced mountaineers, but you don't really know just how they are going to perform on this particular expedition. As you realize, sickness can intervene; people may acclimatize to the altitude with differing degrees, and so on.

Well, on Mt. Everest, we established the route up to the -- oh, about 24,000 ft. level. We all worked on this, and then about half way through this period, when we had established the route to about 24,000 ft., and we were then in a position to get to get the grips on the upper parts of the mountain, we withdrew for a few days, off the mountain, to about the 16,000 ft. level for a bit of a rest. Everybody needed a rest at that stage, and it was then that the actual decisions were made as to who was really going to go high. This was discussed between a group of three of us -- John Hunt who was the expedition leader, myself, and Charles Evans. We discussed all the various personnel. We worked out the various jobs that had to be done, and in the end the final decision was taken by John Hunt himself. Then, according to performance of each member of the party up to that stage, the following tasks were worked out for him. Now, there were many tasks to be done. There was the job of getting the high assault camp established on the Everest Coll, at 26,000 ft. This is a very vital job, to get a lot of porters up there with supplies ready for the assault phase.

Then there was the job of establishing the route up to the south summit of Everest, at 28,700 ft., to pioneer the route up there, which hadn't been done before. This was another very vital job that had to be done by two men.

And then there was the final assault towards the summit. Two men had to do that. And in support of the final assault party, there had to be a group of men who would carry up the high camp to nearly 28,000 ft. -- a very arduous job.

All of these were important jobs, and men had to be picked for them. And it was according to their performances -- the way they were going in the early part of the expedition -- so the decisions were made at this stage as to who was going to do what. I was lucky enough to be going very well, and Tensing was also, and we were chosen for that final assault team.

MR. LANGER: Now tell me something about the final assault. How did you feel when you were going up those last several hundred feet?

SIR EDMUND: I've often been asked as to whether I was always conficent we were going to reach the summit of Everest. I can say no. Not until we were about 50 feet of the top was I ever completely convinced that we were actually going to reach the summit.

On a mountain like this. although the distances may not be so great, you're so affected by the restrictions of altitude that you never really can be completely confident that you're going to be able to overcome the technical difficulties ahead of you.

For instance, when we reached the south summit of the mountain, at 28,700 ft., we were only about -- oh, less than 400 ft. in vertical distance from the top. But stretching between us and the summit was a sharp, corniced ridge, stretching along for, I suppose, a quarter of a mile. And it looked like quite difficult technical climbing. We didn't know, at that stage, as to whether we had the strength and the ability, at that altitude, to make our way along that ridge and to reach the summit.

I was pretty sure we did have, but we couldn't be completely confident. It wasn't until we overcame the major difficulties on that ridge, (there was a narrow crack there, about 40 feet high, up which we had to wriggle our way to get to the top). Once we got up there, then we did feel confident, I think, for the first time that we were going to reach the summit.

MR. LANGER: And when you finally reached the top, what were your thoughts then?

SIR EDMUND: I think my first thought on reaching the summit -- of course, I was very, very pleased to be there, naturally -- but my first thought was one -- a little bit of surprise. I was a little bit surprised that here I was; Ed Hillary on top of Mt. Everest. After all, this is the ambition of most mountaineers.

I know that all my feelings, and although they were -- my headstrong feelings, the pleasure at being there, all my feelings were rather subdued, due to the consciousness of the fact that we had limited supply of oxygen and that we still had to get down those long, difficult slopes to the bottom of the mountain, again.

I think that on a big mountain like that, most of your pleasure comes when you get safely down into the lower camps. You have a great feeling of achievement at reaching the top, but it tends to be always slightly clouded by the thought of the difficulties and dangers of getting down to the bottom again.

And that's when you're tired, and you can make mistakes, you can get careless. There's a sense of anti-climax, and quite often that climb down is one of the more unpleasant parts of the whole trip.

MR. LANGER: What was Tensing's reaction?

SIR EDMUND: Well, Chet Tensing was, I think, on reaching the summit, certainly in many ways more demonstrative than I was. I shook hands with him, rather in British fashion, but this wasn't enough for Tensing. He threw his arms around my shoulders -- we were in oxygen masks and all -- and he thumped me on the back and I thumped him on the back, and really it was quite a demonstrative moment. And he certainly was very, very thrilled when we reached the summit of Everest.

MR. LANCER: Now, I'm going to do this: I'm going to give you a list of names of people

and things, and ask you to give me your off-thecuff reaction to them. What your first thought is. Now, I know that originally you were a beekeeper, and when I say "Bee-keeping" to you, what is your initial reaction?

SIR EDMUND: Initial reaction to bee-keeping? Oh, I don't know, I would say bee-keeping gives me an initial reaction of a lot of hard work, but a lot of excitement, you know. It's a bit of a gamble, bee-keeping. It's -- it depends on the season, on the weather, as to what sort of honey crop you're going to get.

You work extremely hard. We used to work seven days a week, dawn to dusk, during the honey season. But there's always a bit of a challenge in it; a bit of an adventure. And you may not make a great deal of money out of it, but at least you do have this sense of doing something rather unusual. And there's always the sense of -- well, you can't always predict just what's going to occur.

MR. LANGER: What about the Abominable Snowman?

SIR EDMUND: Well, I think that my reaction is now definitely that the whole story is mythological. We went into this very closely on my last expedition, and examined all the evidence, and got a perfectly reasonable explanation, we feel, for all the evidence that appeared -- such as tracks, yeti scalps, skins, and the stories of the lamas in the monasteries. We didn't have any difficulty in getting a perfectly rational explanation for all these phenomena.

MR. LANGER: This is the trip that was financed by the World Book Encyclopedia, isn't that right?

SIR EDMUND: Yes, my last expedition was essentially a scientific one, carrying out high-altitude, physiological research. One of our programs was to examine this business of the Abominable Snowman. And the World Book Encyclopedia financed the whole project.

MR. LANGER: Now, let's get back to the list of people and things and your initial reaction.

What about women mountain climbers?

SIR EDMUND: Oh, I think that some of these women mountain climbers are extremely good. I have climbed with women climbers in New Zealand. One girl we climbed with was a very, very good climber indeed. I don't know that there are many women climbers who have done — there are some, but not too many — who are capable of leading on difficult climbs, but there are many of them who are capable of going anywhere that a man can. Some women climbers have a great neatness of movement, and great balance, and a great deal of confidence. And they can be extremely good.

MR. LANGER: What about George Mallory?

SIR EDMUND: George Mallory really is what I would call the man of Everest. He was the man who did the original examination of the possible routes onto Mt. Everest; he was completely obsessed with the mountain. He was a remarkable man, and he writes magnificently about it. I think George Mallory did more to interest people in the whole question of Everest than anybody ever has done. Of course, the fact that he died on the mountain, in his final attempt on it, rather tends to make it Mallory's mountain.

MR. LANGER: What about Sir John Hunt?

SIR EDMUND: I think Sir John Hunt is the most remarkable leader I've ever had anything to do with. John Hunt is a very competent mountaineer, but this really is the least important aspect of it. He has great powers of leadership; he can inspire you to work very hard indeed. I think his main flair -- and I think this is a great quality of leadership -- is his ability to make you feel that you're part in the expedition is of prime importance, even though it may appear that you're not doing a very dramatic task. John Hunt did have the power to make each man feel that what he was doing was of vital importance. As it was. But it's not everybody who can convey that to the other members of a party.

MR. LANGER: What about astronaut John Glenn?

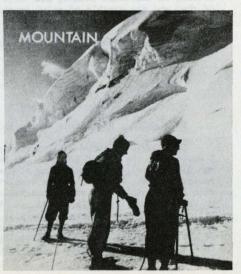
SIR EDMUND: Oh, I have the greatest admiration for John Glenn. I'm less impressed -- I'm impressed enough, but less impressed -- by the fact that his courage, which goodness above knows he has -- more I've been impressed by the calm, efficient way by which, in the conditions in that capsule, he can operate so effectively and so efficiently. I think that this is really the remarkable thing. Many men have the courage to do dramatic feats. I don't think we have any shortage of this. But not too many are able to carry out a feat like that with the calm precision and commonsense that Glenn displayed.

MR. LANGER: Finally, Sir Edmund, let me ask you this: suppose a young person came to you and asked whether or not he should attempt to climb mountains; just like that. Would you give him any advice as to whether he should or shouldn't? In other words, if he just wanted to do it for a lark? What would you tell him?

SIR EDMUND: If he just wanted to do it for a lark I don't think I'd probably give him very much good advice. But I think that it's only for the persons themselves to discover whether they want to climb mountains or not. The same would apply to my own children, although -because I'm interested in mountains and my wife is -- we'd be inclined to subject our children to a diet of camping and tramping and a certain amount of the outdoor life. Yet, I would not attempt to persuade my children to take an interest in the more technical, the more dangerous aspects of mountaineering, unless they wish to do so themselves. I think this is a thing that you have to get to like, and once you like it, you just have to go as far as you personally feel you want to go.

You know, in mountaineering, only about I suppose half of 1% do any difficult climbing.

MR: LANGER: Sir Vyvian Fuchs.



The rest of them get just as much pleasure out of tramping over hill country, climbing modest mountains, camping out in the woods, and all the rest of it. This is all a part of expedition life. And the vast number of people who do this are not interested in doing the really technical aspect. I believe this is a healthy way to be. I believe that people should first learn to love the mountains and the outdoors, and then, if they wish, come to grips with the problems of steep rock and difficult ice.

MR. LANGER: Thank you very much, Sir Edmund Hillary.

SIR EDMUND: Sir Vyvian Fuchs is a man of tremendous, dogged determination. I think that that's the thing that strikes me most about him. He's a very strong man, physically, and this is carried on, I think, into his approach to things. He's very, very determined, very -- perhaps, stubborn in what he does -- but he takes a lot of turning back. He does carry on, and he gets therein the end.

MR. LANGER: Tensing Norkay. SIR EDMUND: I think Tensing Norkay, my opinion is clouded a great deal by a fiction more than anything else. Tensing has a charming personality, and I think really he has been quite remarkable. After all, he started from very, very simple beginnings -- as a sherpa tribesman. was born in the little village of Tami, but due to his -- he was always very strong, very forceful -- he rose up through the ranks of sherpa porter to a sort of high-altitude sherpa porter; he became a Tiger, which meant that he carried loads to 26,000 ft., and then he actually more or less graduated to the ranks of being one of the climbing members of the party. Which very, very few sherpas have ever done before. Of course, he had performed magnificently with the Swiss on their assault in 1952, and then, with us, he climbed magnificently in the final assault. But, you know, although he's had all this adulation from his own people, and tremendous respect throughout the world, he still has the same charm and the same easy manner tht he had before.

MR. LANGER: What is he doing now?

SIR EDMUND: He's the chief instructor in a mountain school in Deibeling. A school formed by the Indian government. And — but this is only one of his sort of things he does; his main job is that he does talk a lot around India, and he's one of the people who's doing as much as anybody to inspire the young Indian to physical effort and physical endeavour. And they're showing us; the Indians of course, for the first time, have been flocking to their mountains in the Himalayas, and have doing some excellent mountaineering.

MOUNTAIN. Primitive man was afraid of mountains. He believed the thrones of his gods were on the high peaks. Places of worship were built at the foot of these huge masses of rock, snow, and ice. Such ancient superstitions were probably caused in part by volcanic mountains which burst into flows of hot lava.

tains which burst into flows of hot lava.

Later, when there were fewer lands to explore, mountains became a challenge to the daring. The mountain climber became the modern adventurer, often braving death to become the first to reach the top of some lofty peak. Today many of the high mountains are the sites of luxurious tourist resorts. Many mountain regions in the United States and Canada are national parks, visited by many thousands of varationing tourists each year.

United States and Canada are national parks, visited by many thousands of vacationing tourists each year. Mountains are the homes of many of the peoples of the world. Many of the peoples of Central and Southern Europe make their living by grazing animals on grassy mountain slopes. Rich minerals are dug from mountain-sides. Thick mountain forests are a chief source of lumber in many countries. Rushing mountain streams are harnessed to electric power for busy cities. When mountains form a barrier to land transportation, engineers may bore tunnels through them.

How Mountains Are Formed. Mountains are formed in three ways. Some represent great movements of the earth's surface millions of years ago. The beautiful Alps in Europe are an example of this type of mountain. Erosion, or wearing away by water, removes part of a

high region, leaving the other part in the form of a mountain peak or a mountain range. The Catskill Mountains in New York and the Ozarks in Missouri are the result of this action of erosion. Volcanic mountains, such as those of the Andes range in South America, were built by the piling-up of lava during a series of eruptions.

How Mountains Are Measured. There is no precise

How Mountains Are Measured. There is no precise difference between a mountain and a hill. Some mountains, such as the prominent Black Hills of South Dakota, are called hills. Scientists and explorers used to measure the height of mountains by barometer readings, or by noting the boiling point of water, as they climbed toward the top. Today, the height of mountains is established in a more nearly accurate way by calculations in trigonometry. But geographers and surveyors often disagree among themselves as to the exact height of a mountain

Some scientists believe that the height of a mountain should be measured according to its distance from the center of the earth. Others believe that a mountain should be measured according to its height above sea level.

In terms of height above sea level. Mount Everest (29,028 feet) in Asia is the highest mountain in the world. The table on these pages includes the ten highest mountains in the world and the highest points on each of the continents.

E.D.W.

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Elburz	Kanchenjunga	Stanovoi		
Everest	Kunlun	Tabor		
Fuji, Mount	Lebanon	Taurus		
Ghats	Nebo	Tien Shan		
Godwin-Austen	Olives, Mount of	Ural		
Himalaya	Owen-Stanley	Yablonoi		
	CANADA			
Assiniboine	Laurentian	Rocky		
Coast Range	Plateau	Saint Elias Range		
Hooker	Logan	Selkirk		
	Robson			
	EUROPE			
Alps	Black Forest	Dinaric Alps		
Apennines	Brenner Pass	Dolomites		
Ardennes	Carpathian	Grampian		
Auvergne	Caucasus	Hills		
Belfort Gap	Cevennes	Harz		
Ben Lomond	Cheviot Hills	Ida		
Ben Nevis	Dartmoor	Jungfrau		

### FAMOUS MOUNTAINS OF THE WORLD

NAME	HEIGHT(ft.)	RANGE	LOCATION	Interesting Facts
McKinley	20,320	Alaska	Alaska	Highest peak in North America. In Mount McKinley National Park.
Maipu or Maipo	17,356	Andes	Chile-Argentina border	Active volcano.
Makalu	27,790	Himalaya	Nepal-Tibet border	Fourth highest mountain in the world.
Markham	15,100	Oueen Maud	Antarctica	Highest peak in Antarctica.
Matterhorn	14,692	Pennine Alps	Switzerland-Italy border	Favorite for daring mountain climbers.
Mauna Kea	13,796	On volcanic island	Hawaiian Islands	Highest peak on these islands.
Mauna Loa	13,680	On volcanic island	Hawaiian Islands	Kilauea, world's largest active crater, is on the side of Mauna Loa.
Mitchell	6,684	Appalachian	N. Carolina	Highest peak in the Appalachians.
Mont Blanc	15,771	Pennine Alps	France	Highest mountain in the Alps.
Monte Rosa	15,216	Pennine Alps	Switzerland-Italy border	Iron, copper, and gold are mined from its slopes.
Nanda Devi	25,643	Himalaya	India	Tenth highest mountain in the world.
Nanga Parbat	26,660	Himalaya	India	Sixth highest mountain in the world.
Orizaba	18,700	Mexican Plateau	Mexico	Highest peak in Mexico.
Pikes Peak	14,109	Rampart	Colorado	Most famous of the Rocky Mountains.
Popocatepetl	17,887	Mexican Plateau	Mexico	Name is Aztec for Smoking Mountain. Volcano now inactive.
Rainier	14,410	Cascade	Washington State	Highest peak in Washington.
Saint Elias		Saint Elias	Canada-Alaska border	Second highest peak in this range.
Shasta	14.162	Cascade	California	Famous for its twin peaks.
Telde		On volcanic island	Canary Islands	Highest peak on these islands.
Tolima	18,438	Cordillera Occidental	Colombia	Active volcano.
Tupungato	22,310	Andes	Chile-Argentina border	First climbed in 1897.
Whitney	14,495	Sierra Nevada	California	Highest mountain in the United States.

## FAMOUS MOUNTAINS OF THE WORLD

NAME	HEIGHT (ft.	) RANGE	LOCATION	Interesting Facts
Aconcagua	23,035	Andes	Argentina	Highest peak in South America.
Annapurna	26,503	Himalaya	Nepal	Seventh highest peak in the world.
Ararat	16,946	Armenian Plateau	Turkey	Noah's ark is supposed to have rested on Ararat after the Deluge.
Cavambe	19,170	Andes	Ecuador	An extinct volcano with a square-topped crater.
Chimborazo	20,577	Andes	Ecuador	For many years thought to be the highest mountain in the New World.
Cook	12,349	Southern Alps	New Zealand	Highest peak in New Zealand.
Cotopaxi	19,344	Andes	Ecuador	Highest active volcano in the world.
Demayend	18,934	Elburz	Iran	Highest peak in Iran.
Dhaulagiri	26,811	Himalaya	Nepal	Fifth highest mountain in the world.
Elbert	14,431	Sawatch	Colorado	Highest peak of Rocky Mountains.
Elbrus or Elbruz	18,481	Caucasus	U.S.S.R.	Highest mountain of the Caucasus.
Erebus	13,200	Ross Barrier	Ross Island	Active volcano in the Antarctic.
Everest	29,028	Himalaya	Nepal-Tibet border	Highest mountain in the world.
Fuji	12,394	On volcanic island	Japan	Considered sacred by many Japanese.
Gannett	13,785	Wind River	Wyoming	Highest point in Wyoming.
Gasherbrum	26,470	Karakorum	Kashmir	Eighth highest mountain in the world.
Gosainthan	26,289	Himalaya *	Tibet	Ninth highest mountain in the world.
Godwin-Austen, or K2, or Dapsans	28,250	Karakorum	India	Second highest mountain in the world.
Hood	11,225	Cascade	Oregon	Inactive volcano.
Illampu	23,012	Andes	Bolivia	Second highest mountain in South America.
Ixtacihuatl	17,343	Sierra Madre	Mexico	Name is Aztec for white woman.
Jungfrau	13,645	Alps	Switzerland	An electric railroad carries tourists part of the way up the mountain slopes.
Kanchenjunga or Kinchinjunga	28,166	Himalaya	Nepal-Sikkim border	Third highest mountain in the world.
Kenva	17,041	Isolated peak	Kenya, Africa	About twenty miles south of the equator.
Kilimanjaro		Isolated peak	Tanganyika	Highest mountain in Africa.
Kosciusko		Australian Alps		Highest peak in Australia.
Logan		Saint Elias	Canada	Highest peak in Canada.
Longs Peak	14,255	Rocky	Colorado	In Rocky Mountain National Park.

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