THE ASCENT OF MT. LUCANIA

BY BRADFORD WASHBURN

Forty years ago, on July 31, 1897, as the Duke of the Abruzzi and his party stood on the summit of Mt. St. Elias, looking northward across the vast ice-field of the Seward Glacier, they discovered two new peaks. One of these, a great snow dome thrusting its smooth crest far above a sea of lesser mountains to the north of St. Elias, the Duke called Mt. Bona after his racing yacht back in Italy. The second of these two peaks rose just to the left of the massive bulk of Mt. Logan, its sharp, icy summit rearing itself proudly above the tremendous western buttresses of King Peak. This he called Mt. Lucania after the liner which had carried him across the Atlantic to America for his attack on St. Elias.

The apparent size of Lucania, dwarfed as it was by the colossal wall of Logan, did not deceive the Duke's unerringly shrewd mountaineering eye. The distant appearance of this peak and Bona, only the very tips of which are visible from the summit of Mt. St. Elias, led him to write in his account that these new mountains might some day be found to be even higher than any of their lofty neighbours. A score of years later, when the White River sheet of the International Boundary Commission was being prepared, the western approaches to Lucania were surveyed and its altitude at last accurately determined at 17,147 ft. This figure rocketed Lucania to fourth place among the highest peaks of Canada and Alaska.*

After the conquest of Mt. St. Elias in 1897,¹ and Mt. McKinley in 1912,² there was a considerable lapse in northern climbing activity until 1925, when the magnificent achievement of the Mt. Logan Expedition³ renewed interest in Alaskan and northern Canadian exploratory mountaineering. Mt. Bona was ascended⁴ in 1930, Mt. Fairweather⁵ in 1931, Mt. Foraker⁶ and Mt. Crillon⁷ in 1934, and Mt. Steele⁸ on the Yukon rim of the St. Elias Group in 1935.

In the winter of 1937 Mt. Lucania still remained unclimbed. Nature had thrown up about her so complete a mass of defences that even the

* Author's Note.—This ranking may well be altered during the next few years as the 17,000-ft. altitude attributed to Mt. Foraker is the result of a reconnaissance survey computation. This peak may well prove to be slightly higher than Lucania when a precise survey of the McKinley Range has been accomplished. Mt. Bona's altitude has been accurately determined by the Boundary Commission at 16,420 ft.

¹ A.J. 19. 116 sqq.
² A.J. 27. 189 sqq.
⁴ A.J. 43. 69 sqq.
⁵ A.J. 43. 221 sqq.
⁶ A.J. 46. 393 sqq.; 47. 14 sqq., 205 sqq.
⁷ A.J. 46. 413.
problem of reaching her base presented itself as a serious undertaking. The approach to Mt. Logan had been considered as one of the greatest trials of the whole expedition. To reach the foot of Lucania from the west meant duplicating the entire approach to Logan and then continuing onward for over thirty miles up the Walsh Glacier eastward into the heart of the St. Elias Range. The scant collection of photographs of Lucania which appeared in the report of the International Boundary Commission had all been taken at great distances and almost all had been retouched to such a point as to render them utterly useless for anything but the merest outline of the topography. Pictures of the mountain taken by members of the Mt. Logan Expedition showed parts of the western face of the mountain at the head of the Chitina Glacier. This glacier, although chaotically rough, appeared climbable, but the walls of Lucania, rising at its head, seemed hopelessly out of the question.

During the course of the National Geographic Society’s Yukon Expedition on April 23, 1935, Pilot Bob Randall and I made a flight for the purpose of thoroughly photographing and scouting both the southern and the eastern approaches to Lucania from an altitude of about 15,000 ft. These photographs, together with the series taken for the National Geographic Society by Russell Dow late in March 1936, covering in more detail several parts of this same area, offered convincing evidence that the only practicable way to attempt the ascent of Lucania was from the south at the head of the Walsh Glacier.

The long and difficult first ascent of Mt. Steele, accomplished by the Wood Yukon Expedition during the summer of 1935, went still further to point out the inadvisability of attempting Lucania from the east. This expedition also confirmed one point which had seemed fairly obvious from a careful study of the aerial photographs—that it would be impossible to slip around or circumvent Mt. Steele in the event of an attempt to climb Lucania from the east. The only possible way to reach the peak from that angle would be by means of a complete ascent of Mt. Steele (16,600 ft.), followed by a descent to a pass about 14,000 ft. high between Steele and Lucania. These two peaks lie approximately eight or nine miles apart, and the problem of relaying practically over the summit of Steele all the supplies necessary to make a secure base at this pass for an attempt on Lucania seemed gigantic, to say the least.

The ascent of Steele gave one added bit of valuable information not made at all clear on the aerial photographs; once over Steele the descent to the Steele-Lucania pass did not look at all difficult. From the pass a safe traverse about two miles in length along the N. wall of Lucania led to a point from which the summit could almost surely be reached. The aerial photographs showed almost beyond a doubt that the pass itself could be attained from the south by way of a narrow ridge leading up a 4000-ft. wall at the head of Walsh Glacier.

Working piecemeal and downhill, we had slowly patched together a route up the mountain. Using the first half of the S. face, whose
upper part seemed quite unclimbable, we figured that it would be possible to traverse our pass, descend slightly on to the N. side, and reach the top of Lucania by the last steps of the great northern ice wall whose lower cliffs at the head of the Chitina Glacier seemed not only most dangerous but probably unscalable as well.

The details of the way that we reached our base at the head of the Walsh Glacier have no place in the pages of a mountaineering journal. In fact, from the viewpoint of the old-fashioned climber, the establishing and provisioning of our base camp were probably a most horrible infringement of all the laws of pure mountaineering.

Bob Bates and I, who had planned the climb together, could not get away in the winter to make the long sledge journey up the Chitina valley from McCarthy, Alaska, to the proposed location of our base camp. Although the long trek over terribly rough glacier could doubtless be accomplished in the summer, it would involve weeks of labour, a very large party, and, worst of all, an expenditure of thousands of dollars for horses and packers. Our summer vacation was short, and we did not have the funds available for a long, complicated expedition.

Bob and I secured Russell Dow, a member of the Mt. Crillon Expeditions of 1933 and 1934, and Norman Bright of Chehalis, Washington, as the two final members of a strong, fast party of four which could work equally well together or as two separate units. Russ, who did not have any academic connection as did Bob, Norm, and I, had left Boston for Valdez, Alaska, early in January, 1937, to take a series of aerial photographs to determine the possibility of erecting a temporary station for meteorological research on the summit of Mt. Sanford. He had planned to spend the remainder of the winter in Valdez, but was easily signed up in February as a member of the Lucania party.

Our food supplies and other equipment were assembled partly in the east and partly by Bright on the Coast, and were despatched to Valdez in several shipments, the last arriving early in April. During the first two weeks of May, Pilot Bob Reeve of Valdez and Russ Dow made three magnificent flights from Valdez in to the Walsh Glacier by way of McCarthy, and succeeded in caching our entire outfit about ten miles from the base of Lucania at an altitude of 8600 ft. by more than 1500 ft. the highest freight landing ever accomplished with a ski-equipped airplane.

These freight flights which established our glacier cache were made in a Fairchild 71 off the snow-covered Valdez airport. On June 17, when our whole party reunited in Valdez, the airport was bone-dry gravel. In order to fly in to our cache, we planned to use Reeve’s smaller plane, a Fairchild 51, which he keeps equipped with skis the year around. His special summer skis are sheathed with a smooth, stainless steel running surface. They are narrower and shorter than the usual airplane ski, and with them we planned to make our flight

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9 See map, A. J. 37. opp. 90.
in to the Walsh Glacier, taking off at low tide from the great Valdez mudflats.

On account of the danger of a forced landing and a long walk back to civilization, we broke up into two groups and planned to make two separate flights to the glacier. In each group we had one man beside the pilot who knew in detail how to return to Valdez in case we had to get out afoot.

Bob Bates, Bob Reeve, and I took off from the mudflats at 1 o’clock on the afternoon of June 18, and flew to the glacier by way of the Tasnuna, Bremner, and Chitina valleys. Despite a cloudless take-off, we landed on the Walsh Glacier beneath warm, forbidding skies at 4:10 that same afternoon. Reeve made a wonderful landing in the face of abominable conditions. Heavy rainstorms during the last month had riddled the glacier with unseasonal crevasses. The cache itself was almost surrounded by them, and we were forced to land the plane nearly a mile down the glacier in order to be certain of safe surface snow.

No sooner had we hit the ground than we sank down nearly a yard in a sea of slush. That night, after three hours of work, we at last succeeded in taxi-ing the ship up to within a quarter of a mile of camp, which we set up beside the bedraggled winter cache. The slush all over the glacier was fathomless—between six and eight feet in depth—and so soft that without snowshoes one went in more than waist-deep at every step. The plane would scarcely move even under full power, much less take off. Bob Reeve was forced to spend the night with us. To make matters worse, during the evening the temperature rose to nearly 60°, the clouds dropped, and we had a wild thunder-storm followed by a torrential warm rain all night long. Everything was drenched, and the plane was hopelessly bogged in. For two days it poured and snowed intermittently, and a thick impenetrable fog covered the glacier.

On the 20th Bob tried to take off, but the slush was so deep and loose that he gave up at the end of our short runway; and as he was taxi-ing back toward camp, his left ski plunged into a deep hole in the treacherous slough. It went in so far that the left wing-tip disappeared beneath the surface of the snow. We dug for hours—pushed, pulled, and dragged frantically. Finally, we got her out safely to the top of the steeply inclined runway once more.

Two days later, after a light freeze, Bob Reeve took off for Valdez on his fourth attempt. It was the closest shave that I have ever seen or ever hope to see; and he carried with him orders not to return with the other two men. We considered him lucky to get off at all. To ask him to risk another landing or, worse still, another take-off on that wretched field, now cut to ribbons by dozens of new crevasses, would have been beyond reason. Russ and Norman stayed in Valdez. Bob Bates and I were abandoned on the glacier, with 100-odd miles of desolation between us and McCarthy to the W. and Mt. Steele plus 60 miles of mountain wilderness cutting us off from Burwash
BASE CAMP AT 8600 FT. ON WALSH GLACIER. MT. LOGAN 35 MILES DISTANT, ABOVE FOG-BANK.

[To face p. 98.]
Mt. Steele at daybreak from Camp II, 9000 ft.

Mt. Steele from Steele–Lucania Col.
Landing in the Yukon territory to the E. We had food and emergency rations for four men—enough to last the two of us nearly until Christmas if we took care. We had originally planned not only to fly in to the glacier but to be ferried out again by plane to Valdez after our climb. This ridiculous weather was now forcing us to retreat in disgrace and on foot even before we could start our advance!

Neither Bob nor I wanted to descend the Walsh Glacier to McCarthy. With four men in our party this might have been the safest and speediest way out of our predicament. But this glacier was far too crevassed and treacherous for two of us to risk descending it alone.

To the E. lay two possibilities. One was by way of a narrow southern fork of the Walsh Glacier over two passes and down a 20-mile unexplored glacier (locally known as Spring Creek Glacier) to the Donjek valley, whence, after fording the Donjek river, we would have a 40-mile walk to Burwash Landing. The other route was by way of the Steele-Lucania pass directly over the summit of Steele, thence 30 miles down wretched Wolf Creek Glacier and Wolf Creek valley to the Donjek, once across which Burwash Landing was still a good 30 miles away.10

Although our pass to the S. of Steele was but 11,000 ft. high as compared with Steele’s 16,600, we decided on the latter as the safest way out. We realized that once over the range and down the other side, we would never have enough food to get back to our Walsh cache if we failed in our attempt to work our way down the very rough glacier in this new valley, which was clearly visible in our little collection of aerial photographs that we had with us at camp. It might prove a terrible job to backpack enough supplies up over Steele to get us safely out to Burwash, but we at least knew that once we had reached Steele’s peak, the route from there out to civilization had been travelled once before; so the watchword of our tiny expedition from the very start was, ‘If they got up Steele, we’ll get down it somehow.’

With this important decision made, we spent two whole days repacking and sorting out every scrap of food and equipment at the base camp. On the day that the plane had left (June 22) we had reconnoitred 5 miles up-glacier to the top of a small icefall about half-way to the bottom of Mt. Steele. We had carefully willow-wanded the trail and routed it over terrain on which we were certain that we could sledge. On June 26, after a solid week of alternating snow and rain and two days of hand-sledging through dense fog along our wanded trail, we established Camp II on a smooth snowfield in the middle of our icefall. We were approximately 5 miles above the base camp and possibly 500 or 600 ft. higher (about 9000 ft.).

At the main base camp we had left everything—tents, clothes, cameras, food—all arranged in a neat heap, carefully protected by a weatherproof tarpaulin in case we had to retreat to it. Reeve had been instructed to fly in to look for us if we had not turned up by August 15. Fifteen hundred dollars’ worth of cameras, food, and camping

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10 *A. J.* 48. 82 (sketch-map).
equipment had been abandoned in one of the saddest parting scenes one could possibly imagine. We had taken with us, in brief: one Logan tent to live in; another with its floor ripped out to use for protecting advance caches; fifty days' supply of food in two bags (one to take us to the Steele-Lucania pass and the other from there to Burwash; this second bag was to be left absolutely untouched until we reached the pass, no matter how long it took to get there); two Woods sleeping bags; two light air mattresses; and a very limited supply of clothing, consisting mainly of volumes of fresh inner soles, mittens, and socks. We had fifteen gallons of gasoline for cooking and melting water; and we took one $9 \times 12$ cm. Zeiss camera and eighteen small film-packs, so as to bring out a photographic record of our trip.

The attack on Steele was grim business. For the first time in our lives we were up against it, and we both knew it from the start. We were not trying to make a first ascent of the W. face of Steele—we had to. Above Camp II we backpacked, since the going was in general too steep and rough for two of us to sledge. We worked mostly on bearpaw snowshoes. Fresh snow was falling most of the time. Every day seemed to have a few hours of clear weather, but at least nine-tenths of the time it was snowing either hard or gently. Breaking trail became more difficult on account of this continued snowfall, and we had our next three camps very close together, so that we could work two or three packshifts a day and thus keep the paths between camps broken at least moderately well.

On the afternoon of July 1 we pitched Camp V at 10,500 ft. at the head of the upper basin of Walsh Glacier. It had snowed every day since we left the base camp and, without our trail markers, we could not possibly have pushed through in twice that time. At the Basin Camp (V) we had assembled about 450 pounds of food, fuel, and general supplies. A sudden break in the weather that evening allowed us to reconnoitre and break trail to an altitude of 12,500 ft. on the narrow buttress by way of which we proposed to climb the Basin wall leading to our pass. The going was steep and the snow conditions abominable. By midnight we were back again at Camp V. There we made a drastic cut in equipment. In order to reach the ridge we had had a short but very delicate bit of climbing through a steep icefall, and the going ahead proved entirely too hard to allow our carrying the heavy loads which we had managed up to that point. Unless we abandoned something more we should be relaying until Doomsday!

Accordingly, after two round trips to the Ridge Camp (VI), on July 2 we threw away one sleeping bag, one air mattress, the tent which we had used for a tarp, all but eight gallons of gasoline, and a large part of our clothing.

July 3 dawned magnificently clear, and nightfall found us safely ensconced in Camp VI, which was pitched in a niche hewn out of snow and ice in the crest of the ridge. The view was stupendous. Directly beside us the 6000-ft. easterly wall of Lucania dropped sheer to the floor of the Basin 2000 ft. below us. Logan was hidden
from view behind a spur of Lucania, but Hubbard, Vancouver, and all the peaks to the south towered clear as crystal as we looked out from the tiny platform of our crow's nest.

The good weather was short-lived as usual. By midnight we were in a blizzard, and by morning 2 ft. of fresh snow blanketed the crest of our ridge. Snow flurries and dense fog lasting throughout July 4 slowed down our progress. We managed, during slight lulls in the storm, to get a trail pushed through to the base of a big sérac wall at the head of our buttress. Again working this route almost entirely blind, after the trail had once been marked by willow wands, we succeeded in fighting through three 60-lb. relays to the ice blocks, in snow varying from knee- to waist-deep. There we set up camp at an altitude of slightly below 14,000 ft. on another improvised shelf in the deep powder snow in a lee of the ice blocks, late on the night of July 5.

It snowed again all that night and fitfully the better part of the next day, but there were still enough clear moments to reconnoitre and mark a trail through a pass leading between the blocks of the sérac wall. Above this a gentle slope half a mile long led us safely to the great broad pass between Steele and Lucania. We first reached the pass at noon on the 6th, in such a dense fog that the only way in which we knew where we were was that after an hour or more of walking across a gentle slope, we had started to descend a bit on the other side of the pass. By the afternoon of the 7th we had relayed all our supplies into Camp VIII on the crest of the divide at about 14,000 ft. It continued snowing all that day, but the total fall was only about six or eight inches. That evening just at supper time the skies cleared suddenly, and we made fully as sudden a shift in our plans. We had reached the pass with approximately thirty days' rations, after desperate cutting and throwing away of many small items at Camps VI and VII. We knew that we needed all the food that we could carry to get us safely to Burwash, but we were also certain that we could not possibly carry more than twelve days' supply as well as camping equipment along with us at one time without relaying—and we could not possibly relay up and down the E. side of Steele. When we should start for Burwash from where we were, we must plan on going straight through with no relays at all. Even then it would be a very close call. This would leave ten or twelve days of food which we would have to abandon in any case at the pass unless we had some better use for it. So we decided then and there that we would have one last desperate crack at Lucania to see if we could change to victory what up to that moment had been a complete rout.

That evening, in a six-hour clear-off, we lugged eight days of food, some rope, ice-axes, crampons, willow wands, and gasoline three miles over towards Lucania, across the deep, soft snowfields of the pass. We willowed the trail, had a momentary glimpse of Lucania
through confused masses of floating mist, and were back at camp by 10 o'clock at night. One more load and we would be ready for an attack. If it had not been for that wretched and everlasting powder snow, we would have been able to pack everything over in one load. Alaskan coastal weather is famed as some of the worst in the world. Lucania and Steele enjoy what Bob Bates and I feel is first distinction for the worst weather in the entire universe.

On the morning of July 8 it was snowing again; so we squatted gloomily in the tent all day, amusing ourselves by cutting a hole in the bottom of our sleeping bag so that we could lie with our heads at opposite ends of it and thus have a bit more room than we had had jammed tightly together into one end.

The Lucania plan had hinged on one Alaskan weather axiom which we had learned from six years of experience among the mountains along the coast: every year we had been to Alaska, no matter how devilish the weather, we had always had a clear streak of no less than three cloudless days sometime between July 4 and July 25. Before July 4 we had never had a single clear day; after that clear weather was spasmodic, came at irregular intervals and was broken in August by terrific S.E. storms. From the beginning we had planned the whole Lucania expedition so that we would reach our pass by July 4. Once there we had hoped to be prepared to wait in a striking position until our chance came.

The chance arrived as suddenly and unexpectedly as ever. The clouds began to break on the afternoon of the 8th. By 4 o'clock a slight easterly wind began to blow, and it was evident that this time we were due for a real clear-off. By 5 o'clock the sky was almost cloudless above us in every direction. Lucania towered invitingly on the other side of the pass, and a glorious sea of silver clouds rolled gently along in the valleys below us, its billowed surface lightly caressed by a fresh clear-weather breeze.

We had not had a single melt above Camp V. In fact, our temperatures above 10,000 ft. had constantly hovered between zero at night and 25° or 30° in the daytime. With the arrival of this cold wind, the thermometer dropped rapidly, first to 10° and then to 5°.

We stuffed down a speedy 5 o'clock supper, and by 6 we were on the trail. At 8 o'clock we fused our evening's loads with the little cache that we had left at the end of our trail the night before, and staggered on for another mile, at first downhill and then along the level through powder snow so soft that we sank in to our knees even with our snowshoes on. At worst it was a relief to have snowshoes on again, for the buttress had been so steep that we had been unable to use them anywhere between Camp V and Camp VIII.

By 10 o'clock that night Camp IX was pitched on the snow shelf at the very foot of Lucania. Unfortunately, however, we had lost nearly 1000 ft. on our traverse along the N. face and still had a good 4000 ft. to climb to the summit. At midnight when at last we turned
APPROACH TO MT. LUCANIA FROM 13,000 FT. SUMMIT BEYOND RIDGE, WITH FROST CLOUD.

PHOTO, B. WASHBURN.

E. PEAK OF LUCANIA, FROM CAMP AT 14,000 FT.

[TO FACE P. 102.]
At 15,000 ft., on N. flank of Mt. Lucania.

Descending E. ridge of Mt. Steele. Foothills of St. Elias Range in background.
in after pitching camp, the thermometer stood at 8° below zero and there was scarcely a cloud in any direction.

July 9 dawned cloudless. It was 6° above zero as we crawled out of our sleeping bags and brewed ourselves a huge breakfast of prunes, corn-meal mush, bacon, and coffee—the biggest and most luxurious breakfast we had had for some days. Stuffing our rucksacks full of extra socks, mittens, food, crampons, and the inescapable inner soles, we set out at 9 o'clock just as the rays of the sun were beginning to feel a bit warm.

Before we had gone a hundred yards up the slope that rose behind camp, one thing was clear: if we could not use snowshoes most of the time, we were licked. I took mine off for a second to test the snow and went in half-way up my chest. There was not a sign of crust anywhere, no matter how deep down. We took turns climbing the 40° slope in big zigzags, each breaking the trail fifty steps and then climbing aside for the other to lead; 40° is nearly the limit for snowshoes; if the day had not been very cold, and if we had not been able to zigzag back and forth in the shelter of great protecting masses of ice scattered all over the face, we never would have dared risk the danger of avalanches. We both have our heartiest doubts, however, if Lucania is ever in really good climbing condition.

At 1 o'clock we hit a 45° side slope leading into the 16,000-ft. pass between the second and third of Lucania's four peaks. We were forced to get into this pass somehow before we could traverse Peak No. 2 (16,300 ft.) and then tackle the final 800-ft. summit cone. Here the wind had blown very hard the day before, and a firm crust covered the entire surface on which we were walking. This crust slowly got harder and harder. First we could smash it with our snowshoes—three whacks for each step and then several little ones to flatten out the foothold. Then it became so icy that it was impossible to break through it at all on shoes. I took mine off to try going afoot, and promptly broke through into loose powder a foot more than waist-deep. Again we thought that we were stumped, but we decided that the view of Logan from the pass would be worth fighting ahead for at least another hour. So we started out again, this time cutting away the crust in sections with our axes and carefully patting down a firm trail in the soft powder underneath it. This 200-ft. trench took over an hour to excavate, and, finally, at 2.25 in the afternoon, breathless and very hungry, we plodded out on to the 16,000-ft. pass.

We had not had a bite to eat since 8 o'clock in the morning. So we paced slowly back and forth to keep our feet warm, munching chocolate and dates and taking in that whole magnificent panorama for nearly a quarter of an hour. At first we had thought that we had gone our limit, but a few handfuls of dates and raisins and some nibbles at our supply of cheese changed the outlook very speedily.

The summit lay in plain sight about a mile away. To reach it we had to climb a 300-ft. ridge of ice and hard-packed snow, descend a few yards into a broad pass, and then zigzag up the last cone.
only apparent problem left was the ridge. It looked very steep. If we were forced to do much more step-cutting, we were finished, for the 5½-hour fight up through the drifts had tired us so much that we had but little energy left.

We left the snowshoes in the col with most of the food and put on our crampons for the last attack. The icy ridge fell easy prey to the crampons in a few sharp steps. At 3.15 we stood atop the second (N.W.) peak of Lucania. The summit beckoned, still about a mile away. All that now remained ahead of us seemed perfectly straightforward. We were sure that we could make it. We climbed very slowly. The last thing that we must avoid was failure as close as this. One fact was certain—if we failed on this try, we would be so exhausted that we would never be able to make another attempt before the weather changed, and we did not have enough food to wait for another clear spell.

At 4.30 we came out on to the top of what we had thought all along was the summit. Our lungs were filled with a victorious yell when, to our dismay, slightly to the W., rose another mound clearly a trifle higher. For a moment we rested in disgust. Then we descended into a little hollow and, ten minutes later, after following for a few yards along the crest of the heavily corniced ridge, we scrambled out on to the last sharp snowdrift. Our yell of triumph could have been heard in Timbuctoo! To quote from my diary:

'The top is a knife-edged ridge about 30 ft. long, not corniced, with an appalling drop to the W. down such gullies of ice, snow, and rock as would be hard to surpass anywhere for ruggedness. A scattering of fleecy clouds far below us was all that blocked our view. Every peak from Bona to Fairweather stood out crystal clear. Hubbard, Alverstone, Jette, Seattle, and Vancouver, all our old Yukon Expedition friends, rose fifty miles to the S. Logan towered thirty miles to the W., seeming even larger and more impressive than ever before. The rugged Chitina Glacier, buried under rocky moraines, twisted along its narrow valley. Far away toward its snout a deep green reminded us that there was still an outside world of something else besides snow and ice. Our trail wound up the slope far below us, dodging crevasses and skirting great blocks of bluish ice, their contours enhanced by the late afternoon light and shadow.

'The great pass spread out below us, our trail and camp site clearly discernible on its level white surface. Curious greenish lakes dotted the Walsh and Logan Glaciers. Mt. Queen Mary looked tremendous. What a wonderful view one could have from there right in the middle of the range and what huge icefields surround her! St. Elias peeped from behind Logan. What a time the Duke of the Abruzzi must have had climbing that steep ridge out of Russell col!

'Gorgeous anvil-shaped thunderheads, with stunning silvery tops and inky rain-drenched bottoms, rose far above the bright sea of clouds that covered all the Yukon east of the crest of the range. This great glittering sea ended abruptly where it touched the height of
land, as if held back by a mighty snowy dam. Through a tiny hole to the left of Steele we could see a snatch of Wolf Creek valley black with pouring rain. What a relief to know that it was warm enough to rain somewhere!

Steele looked surprisingly high. To its left lay the high shoulder over which we must pass—our last great barrier. Bona, Bear, and Wood, especially the last, with its beautiful afternoon shadows, stood out huge to our north amid a sea of bristling peaks, many of them as yet unnamed and unmapped.

"These were the impressions that we had atop Lucania."

The descent to our camp that night was like a dream. The retreat out to Burwash Landing over Steele was a veritable nightmare.

On the 10th, early in the morning, we abandoned Camp IX with the thermometer at 10° below zero and trekked rapidly back to our cache at Camp VIII. There we threw away all the kitchen equipment but one pot, the frying pan, and one stove and burner. We tossed away all the gasoline but one gallon, cut most of the floor out of the tent, and threw away all our clothes, in a grim determination to get our two loads down to sixty pounds.

That night, after an early supper, we set out with two 50-lb. loads and broke trail to a point 500 ft. below the top of Steele. There we ran out of willow wands. We dumped our loads in the snow at the end of the marked trail and continued on over the shoulder of Steele, breaking a path in the soft snow in the hope that it would last at least until the following morning. We skirted the summit of Steele at 8.20 that night and descended a few feet on the E. side to try to get a glimpse of the ridge which we knew we would have to descend. But the drop was too steep for it to show over a shelving plateau of ice a thousand feet below us. It was rapidly getting cold, and the night wind was beginning to pick up once more. So we hustled back over Steele and reached camp on the run in a frigid breeze shortly before 11 P.M.

At daybreak we were up again. It was 9° below zero, and we loafed about camp until the warmth of the sun calmed the wind a bit and put more energy into our limbs. At 9.15 we shouldered our last loads and abandoned the pass camp for good. Part way up Steele we fused loads with the cache of the night before and, beneath 75-lb. packs, plodded slowly towards the 16,400-ft. shoulder. The sky was still cloudless except for cirrus streamers W. of Logan and a weird reddish haze over the sea. As we zigzagged slowly up the remains of the last night's trail, the rays of the noonday sun warmed us, for there was scarcely a breath of wind.

At 12.45 we trudged across the broad northern shoulder of Steele to the spot where we had stopped the previous evening, and tossed our loads with gusto into the drifts. Never in my life have I seen such an endless supply of fresh, soft, bottomless powder snow as we found on Lucania and Steele.

Seated atop our packs in full sight of the final cone of Steele, which
now rose but a few hundred yards above us, we ate a hearty lunch with the cool, self-satisfied air of a very large cat waiting to pounce upon a tiny mouse.

At 1.15, armed with only our small camera and its last two film-packs, we set out for the top. Several rather treacherous snow-covered cracks split the iceslope on this side of Steele. We climbed for fifteen minutes on snowshoes until the grade became too steep and icy. Then we changed to crampons, chopped half a dozen steps in one last steep rise, and at 1.45 emerged triumphant on the summit.

Our long siege of Lucania and Steele was crowned with a wonderful reward. Scarcely a single cloud broke the superb blue of the sky all the way from Mt. Bona, 60 miles to the N., to Mt. Fairweather, over 200 miles to the S. Every peak of the St. Elias Range rose clear as crystal before us. To the E., a glorious contrast to the glaring icy desolation out of which we had slowly worked our way, dark Wolf Creek valley wound its way downward into the Yukon. Twisting and turning like a great striped snake and slowly disappearing beneath a mountainous mass of moraines, our one avenue of retreat faded beneath a glorious sea of thunderheads 20 miles E. of where we stood.

Thrilling as was the realization that our uphill fight was at an end, the greatest thrill of the whole expedition was Bob's discovery of a bundle of Walter Wood's willow wands planted securely on the tip of the last snowdrift, exactly where he had left them nearly two years before, on August 15, 1935. They were so firmly frozen in place that we could not break them loose no matter how hard we pulled and chopped, and at last we had to satisfy our desire for curios by breaking off half a dozen and stuffing them in our rucksack.

At 2.15 we started the descent to the shoulder, after one of the most wonderful half-hours I have ever spent on any mountain summit. Windless, cloudless, and warm, those fleeting moments that we had atop Steele will always thrill us with their memory. Plunging down the few deep drifts which separated us from our supplies, we reached the packs again at 2.30 and started another orgy of throwing things away. We had seen part of Wood's ridge from the summit, and we were certain that it was no place for 75-lb. loads!

We were determined to descend to the Wolf Creek Glacier that night if our legs and the weather would only hold out. Below the ridge we would no longer need gasoline to melt snow for water, and 30 miles farther down we were certain that we could kill game for food with our pistol. Our position remained precarious only as long as we stayed above the snowline, where our every move depended entirely on the weather. We cut out the entire remainder of the tent floor, trimmed off all the guy ropes, and threw away all the tent pegs, the air mattress, four lbs. of food, and one of the rucksacks. We had nineteen lbs. of food left for ten days.

At 3.15 we loaded up, and at 3.20 we headed down the slope towards Wolf Creek with 60-lb. packs. At 8.35 that night, after what had
E. face and ridge of Mt. Steele. Air photo from 15,000 ft.

[To face p. 106.]
WOLF CREEK GLACIER, with Mt. Logan in background, 50 miles distant. To right, Mts. Steele and Logan, E. ridge of Mt. Steele descending to glacier.

Air photo from 13,000 ft.
seemed a descent that would never end, we straggled on to a moraine at the head of Wolf Creek Glacier and pitched our tent on a heap of flat rocks. We had thrown away our snowshoes a thousand feet below the top and abandoned our crampons half an hour above the bottom. All the way in between we had descended between knee- and waist-deep in powder snow partly veneered with tough, breakable crust superimposed on long slopes of clear ice. Thank Heaven that we did not have to climb up that ridge!

From the head of the glacier to Burwash Landing is not a mountaineering tale. It was a constant struggle with wearying legs and fast diminishing food. The next day we descended in ten hours to a point on a meadow about two miles below Walter Wood’s ‘advance base’ (Camp 6). At 11.45 on the next night (July 13) we reached the W. shore of the Donjek river after a sixteen-hour battle with damnable moraines, swollen torrents, and packs that seemed constantly to grow heavier. Try as we would, the next day we could not find a single place where we could safely cross the Donjek afoot. We had had to throw our axe away long before, and with no good timber available from which to build a raft, we made a last desperate cut of supplies and headed upriver for a ford. We would have given a million dollars for a horse at any time that day! By midnight we had walked another sixteen or eighteen miles up river. There we gave up in despair and camped, swathed in our poleless tent, on a bank of mud and gravel halfway across the Donjek Glacier.

The next noon, after several hours of hacking our way through a field of séracs, shod in Barker boots and scared stiff, we reached a wide flood-plain and managed to ford the river fully twenty miles above the usual horseback ford. (Even on horseback it is necessary to swim at least one of the major streams of the river, and we later learned that only one man has ever been known to cross the Donjek afoot.) That afternoon and evening we worked our way ten more miles downstream, and late the next day we were back opposite the place where we had camped on the night of the 13th.

Bolstering our remaining food supply with two red squirrels and several pots of mushrooms picked in the woods, we managed to pick up the old horse-trail from the Donjek to Kluane Lake that evening. That night we camped beside it on a small hillock in the middle of a swamp. There Bob felled a superb snowshoe rabbit with our trusty pistol, and we feasted like kings on everything from chops to lungs. The scraped skeleton and the four feet, which we saved for good-luck charms, were the only remainders of that rabbit the next noon. Shortly after lunch, after several hours of bogging along in muskeg across the last pass at the head of Burwash Creek, we ran into a ten-horse pack train bound for a Donjek hunter’s camp. The sight of men and food nearly drove us crazy with joy. We followed them back through the swamp to their cabin eight miles westward across the pass.

Two days later, at 5 o’clock in the afternoon, Bob and I bounced
into Burwash Landing, the last two miserable members of a long pack train augmented by eighteen horses rounded up on the Donjek flats by the two Indian boys and the Frenchman who had met us on the trail.

Ten continuous hours on pack saddles over thirty dreadful miles of swamp and canyons had reduced us to two pitiful, aching shadows of the proud mountaineers who had left the Donjek Camp with such high expectations of their horsemanship early that morning. Gene Jacquot, genial owner of the trading post at Burwash Landing, fed us that night until we nearly burst with a meal that would have thrilled the fussiest of kings—fresh fish, whipped potato, string beans, lettuce, sheep steaks, corn, and slice after slice of luscious lemon meringue pie!

The following afternoon (July 20) a Pan American Airways plane, bound for Fairbanks from Juneau, dropped lazily out of the skies and whisked us off for supper in Fairbanks at 150 miles an hour.

The fight for Lucania had been long and hard, but worst of all by far was our final struggle with the Donjek. Words fail me adequately to describe the one factor above all others which made possible our success—the dauntless and inspiring friendship and companionship of Bob Bates.