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CAIRNGORM
CLUB
JOURNAL**

91

1957

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THE CAIRNGORM CLUB JOURNAL

Vol. 17

1957

No. 91

Edited by R. L. MITCHELL

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THE regular appearance of the *Cairngorm Club Journal* depends on the availability, in good time, of sufficient material. It is therefore primarily in the hands of members themselves. Contributions for No. 92 should be sent, in their final form, to the Hon. Editor, Dr R. L. Mitchell, 125 Cranford Road, Aberdeen, by November 30, 1957. Articles, notes, and illustrations will be welcomed for consideration. Articles should in general be from 1,500 to 3,000 words in length. Photographs submitted need not, in the first instance, be larger than contact prints, provided the negative is available.

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Communications regarding advertisements should be addressed to Mr L. B. Perkins, c/o N.S.H.E.B., Millburn Street, Aberdeen.

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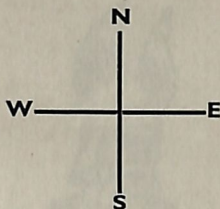
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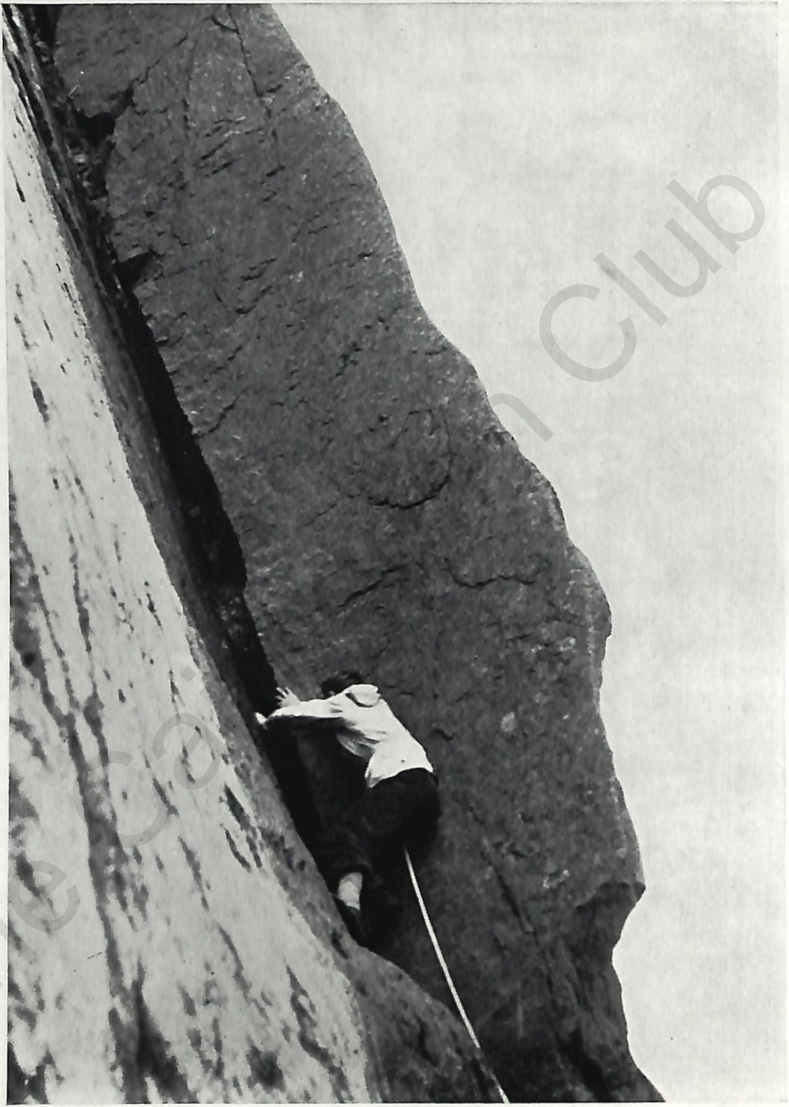
WHAT KIND OF ROPE ?

F. SOLARI

IF someone were to take the trouble to run a poll to find out why we choose the equipment we do, we should probably read something as diverting and as unprofitable as the typical pre-election poll. At a guess, the "don't knows" are likely to be as numerous as any other group, yet a life may depend on one's choice of rope, and it is well to have some more rational basis for buying a climbing rope than the fashion of the moment, the sales talk of a dealer, the feel of a brand-new and tightly coiled rope fresh from its package, or even the feel of one's wallet. The present practice is to use a full-weight nylon rope of about $1\frac{1}{4}$ inch circumference weighing about 4 lb. per 100 feet for rock climbing and rather thinner nylon for the Alps, but are these the best choices we can make ?

There are, of course, many varieties of mountaineering, and it would be unreasonable to expect one rope to be ideal for them all. To narrow the field (and to keep this article within bounds) let us consider only the British climber whose interest is mainly in the major crags under both summer and winter conditions. For him it is obvious enough that the rope must be flexible under all conditions—dry, wet, and freezing—and it must have great strength and flexibility, how great we shall see. It is also very desirable that the rope should be light in weight and resistant to wear and deterioration when not in use. These properties are possessed in varying degrees by ropes of various materials, constructions, and sizes, while some may be obtained only at the expense of others, and a rational choice of rope must involve an assessment of their absolute and relative importance.

The most exacting duty ever likely to be demanded of a rock climber's rope is that of holding a falling leader—and even the most competent leaders have been known to fall. Much has been written



CRIMSON SLABS

J. Y. L. Hay

on the problems of holding a falling leader, notably by Tarbuck who has drawn attention to the intolerably great loads which a second may have to withstand if he tries to hold the rope, without letting it slip under control, but let us do a little elementary dynamics to help us to find what a rope has to do in stopping a falling leader in order to determine how much strength and elasticity it must have. I say strength and elasticity because these are the properties commonly measured in testing ropes, but we cannot consider them separately, and it will simplify our approach if we consider how much energy a rope must be capable of absorbing.

When a rope is stretched, whether in a testing machine or in an accident, we may say that work is being done on the rope or that the rope is absorbing energy—these being merely two ways of saying the same thing. (The concepts of work and energy are alike as sell and buy are alike.) The unit used for measuring work and energy is distance \times force (usually foot-lb.), and by continuously measuring the amount by which a rope stretches and the load on it we can compute the energy absorbed by the rope. The energy absorbed increases as the rope stretches and reaches its maximum immediately it breaks. For any given load and type of rope the extension is proportional to the original length of rope, and so the energy absorbed by a rope is proportional to its length, and we may express the capacity of a particular type of rope to absorb energy in foot-lb. per foot of rope. The convenience of this measure of a rope's performance arises from the fact that a climber who falls acquires kinetic energy (Greek *kineo*, move) which is also measured in foot-lb., and when the rope becomes taut and begins to arrest his fall we may imagine that his kinetic energy is transferred to the rope. It is thus simple arithmetic to see whether the falling climber's kinetic energy is less than the maximum which his rope can absorb, in which case his rope holds, or greater, in which case it fails.

Suppose a leader, weighing 200 lb. in his clothes, falls when he is 50 feet above his well-belayed second, and that he falls 100 feet freely before the rope becomes taut and begins to arrest his fall. He will continue to fall while the rope stretches—say, a further 20 feet—making a total fall of 120 feet, and in falling he acquires energy equal to his weight multiplied by the height of his fall, that is, 24,000 foot-lb. Now if the second is intelligent and alert, he may allow the rope to slip under control so that most of the leader's energy is absorbed in friction. But the second may not have heard of Tarbuck, or he may have read and ignored his teaching, or the rope may become

jammed behind a flake beyond the second's control, so that the leader's survival depends on whether his 50 feet of rope will absorb 24,000 foot-lb. of energy before it breaks.

Suppose the rope is the currently popular full-weight nylon rope weighing about 4 lb. per 100 feet. Such a rope will withstand, when new, over 3,200 lb. and stretch by more than 40 per cent. before it breaks. Recent tests on a large number of nylon ropes have shown that on average each foot of such rope will absorb about 500 foot-lb. of energy before breaking when extended in a tensile testing machine—rather more when extended rapidly as would be the case in an accident. Thus the 50 feet of rope between the leader and the second will, if new, absorb not much more than 25,000 foot-lb. before it breaks, which is uncomfortably close to the 24,000 foot-lb. of the falling leader. An extreme case, you may think, so let us see what happens if the same leader is only 5 feet above the second when he peels off, the rope jamming again at the level of the second. He falls freely for 10 feet before the slack is taken up and another 2 feet while the rope stretches, making a total of 12 feet, so that he acquires $12 \times 200 = 2,400$ foot-lb. of energy. The 5 feet of rope will absorb a little more than $5 \times 500 = 2,500$ foot-lb.—leaving a still more uncomfortably small margin. In fact, the shorter the run-out the smaller the margin, so please don't get the idea that it is any less lethal to fall off on a run-out of 5 feet than on a run-out of 50 feet.

You may still protest that I have staged artificial and rather improbable accidents in that there are few situations in British rock climbing where a leader may fall freely for more than twice the length of rope paid out. A study of a number of accidents has, however, shown that something much worse may happen. A leader falls and in so doing drags the rope over the face of the crag, and when he has fallen perhaps 50 feet the rope becomes snagged over a flake or in a notch at a distance of 15 feet or less from his waist knot. The second can do nothing to free the rope and the leader's survival clearly depends on the ability of the 15 feet or less of rope to absorb his kinetic energy without breaking. The most the rope can absorb is 7,500 foot-lb., but the leader's energy is 10,000 foot-lb., so that the rope must break. Note that this conclusion holds even if the rope is undamaged by its contact with the rock at the point where it became jammed. Examples of this kind of accident have been investigated and reported on in *Mountaineering*, March 1952 and September 1954. At the time they were investigated it was thought that the ropes concerned failed largely because of laceration suffered during contact

with the rock, but it is clear that the ropes concerned would have failed even if they had not been damaged—indeed, that the present full-weight nylon rope of 4 lb. per 100 feet is only capable of holding a falling leader in favourable circumstances.

This may seem a discouraging conclusion, and you may ask whether it is worth paying the extra price for nylon. So consider very briefly your chances with manila or Italian hemp rope of $5\frac{1}{2}$ lb. per 100 feet—the size hallowed by tradition as full weight for ropes of natural fibres. With a breaking load of 2,500 lb. and extension of 15 per cent. compared with the 3,200 lb. and 40 per cent. of a 4 lb. nylon rope, this rope can absorb at most only one-third as much energy as the nylon, so that there will be many possible accidents in which a 4 lb. nylon rope would hold a leader but a $5\frac{1}{2}$ lb. manila or hemp rope would certainly fail.

You may wonder by now where all this is leading—I say that the present full-weight nylon rope is inadequate for rock climbing and that full-weight manila or hemp is still more inadequate. But can I offer anything better? Can my dynamics compute what minimum sort and size of rope we must use in order that a leader may be spared the hazard of a breaking rope if he falls? The answer is yes—if only you can tell me in advance exactly what is going to happen in any particular accident. But just as it is impossible to predict the events of a climbing accident so it is impossible to predict the maximum energy per foot which a rope will be called on to absorb in emergency. Consequently, it is impossible by any rational process to determine the minimum type and size of rope which can be relied on never to fail in an accident, and unless we choose to use ropes very much heavier than our present full-weight nylon we must recognise that there will always be some risk of rope failure in rock climbing. But we can and should choose our rope so that the risk of failure is reasonably small.

We should, of course, see if we can give the leader a better chance by using a rope of some other material than nylon or the natural fibres. Terylene is a very promising synthetic fibre with many attractive properties (including even less water absorption than nylon), but so far no rope manufacturer has succeeded in making Terylene rope with more than about one half of the energy absorption of nylon, weight for weight. In fact, no other material yet used for rope manufacture exceeds or even approaches nylon's capacity to absorb energy, weight for weight, so that our only available means for increasing a falling leader's chance of survival is to use a nylon rope

heavier than 4 lb. per 100 feet. We cannot calculate just how much heavier our rope should be, so we have to guess, or, in parliamentary language, use our judgment. If we use the heaviest nylon rope we can handle and afford we shall have an easy conscience. A nylon rope of about $5\frac{1}{2}$ lb. per 100 feet need not be unmanageably heavy or inflexible; it has substantially greater energy absorption and is much less weakened by local damage and wear than a 4 lb. rope. Maybe we should go still heavier, but the $5\frac{1}{2}$ lb. rope seems to be a tolerable compromise between security and weight (yes, and cost), and perhaps I am not unduly prejudiced by the fact that rope of this weight is available from at least one reputable manufacturer.

There are, of course, snags even with nylon. All textile materials are weakened by heat, but nylon can be melted at temperatures not much above 200° C. This is well above any temperature likely to be reached in use with this exception—when a running belay is threaded directly through a standing loop of nylon rope. In the event of a fall the friction heat generated may melt the standing loop. Note that the running rope does not melt, since the heat is distributed along the length of the rope and no point of it gets hot enough to weaken it seriously. The moral is always to use a snap-link between a running rope and a standing loop. Then, again, nylon is damaged severely by organic and inorganic acids, and although hemp and manila also suffer attack by acids it is particularly necessary to keep nylon away from acid. Nylon is degraded by exposure to sunlight, but the bright filament used in rope manufacture is less vulnerable than the delustred nylon used in some other textiles. In any case, the total exposure to sunlight in the life of a climbing rope is relatively small, and I should expect that wear is more likely to limit the useful life of a nylon rope. Resistance to wear is very difficult to assess—nylon stands up to fine abrasion better than natural fibres, but I know of no tests to measure the resistance of any rope to the severe abrasion or laceration which may occur in an accident. Until we know more about this property, perhaps we should include a substantial factor of ignorance in choosing the size of rope to use.

And what of the other properties I mentioned in my second paragraph? We must be prepared to carry more weight but not, I suggest, unreasonably. For the rest, nylon will give us a high degree of flexibility, low water absorption, and consequent freedom from freezing, and total immunity to mildew.

And when you have your heavier-than-full-weight nylon rope, please remember that in an accident it may need all the help you

can give it by allowing it to slip under control—and that if it should become jammed then the “give” of a Tarbuck knot may make all the difference between failure and survival.

One final word of caution. Not all rope manufacturers seem to know how to make good nylon yarn into good rope, and some nylon rope is very inferior to the best in energy absorption, flexibility, and stability. In no other activity is rope called on to withstand such severe treatment, and only the best possible ropes which the industry can produce may be considered good enough for mountaineering. When better ropes can be made we must have them, and I cannot imagine a time when we shall not need better ropes than the industry can produce. For the immediate future, let us hope that advances in materials and methods of manufacture will give us ropes with greater energy absorption weight for weight, greater flexibility, and greater resistance to damage such as occurs when a rope becomes snagged in an accident.

Many of the tests referred to in this article were performed in the course of the work of the Committee of the British Standards Institution which is preparing a British Standard for nylon mountaineering ropes. For the rest, I have drawn freely on the work of the Equipment Sub-Committee of the British Mountaineering Council, whose assistance I gratefully acknowledge.

TO THE FAR SOUTH

I. M. BROOKER

AUGUST 1954 saw five of us embark in Glasgow on the *Southern Opal*, a 10,000 ton whaling tanker and transport, *en route* for South Georgia, a small island on the fringe of the Antarctic, latitude 56 south, and some 1,000 miles east of Cape Horn. The purpose of the expedition was primarily survey and mountaineering with glaciology, natural history, and a general extension of the current knowledge of the interior of the island as secondary objects. All members of the party were mountaineers, the venture being the 1954-55 British South Georgia Expedition. Six months were spent on the island.

South Georgia is one of the Falkland Island Dependencies and was first sighted and annexed to Britain in 1775 by Captain Cook on one of his southerly cruises. The island is about 120 miles in length and anything from 10 to 25 miles in breadth, its main feature being a great backbone of mountain range nearly 10,000 feet in height, from which countless glaciers, separated by rock and ice ridges, radiate and find their way to the sea.

Sir Ernest Shackleton died and was buried in South Georgia in 1922. Here was played the final drama which followed his epic trip across the Antarctic and South Atlantic Oceans in 1915 in a small open boat and his landing on the wind-swept south-west coast of South Georgia. To reach the north-east coast it was necessary to cross the mountains which run the length of the island, and Shackleton felt that divine guidance showed him the way. If that was not the case he was certainly very lucky, as we found only two places where it was possible to make a quick crossing. We looked for signs of his 1915 party but could find no trace of the abandoned primus stove or other equipment.

Vegetation is sparse, growing only on the first thousand or so feet above sea-level and consisting of tussock grass, four varieties of alpine flowering plants, and a few lichens and mosses. Because of the rich food content in the surrounding seas, including plankton, krill, and squids, bird and animal life around the coast is prolific. Every beach is littered with colonies of elephant and other types of seal, whilst four types of penguin, including the well-known king penguin, are encountered in large numbers. It is a breeding ground

for many different members of the petrel family and other sea birds, including that very famous wandering albatross. The island even boasts three birds of its own, namely the South Georgia teal, pipit, and blue-eyed shag.

South Georgia is the centre of the land-based Antarctic whaling industry on which the economy of the Falkland Islands Dependencies is balanced. Because of this, it is quite an important place. Three whaling companies—one Norwegian, one British, and the third Argentinian—operate their catcher fleets from its shores in the summer months. In addition, the Argentinian company holds the sole licence to kill elephant seals, and six hundred of these grotesque bulls, which weigh about three tons each, are shot yearly, their skins being rendered down to provide a high-grade oil.

During the summer months, when the whaling ships arrive at the beginning of the season, the population of South Georgia rises to about twelve hundred. This dwindles again in the winter to some two hundred people, who consist of a skeleton staff at each whaling station together with the dozen or so permanent British staff under the charge of a resident magistrate responsible for the affairs of the island and its government, weather forecasting, and radio communications.

The expedition used a small hut at the British colony as a base and from here made trips of from four to five weeks into the interior. The local sealers and whalers proved most co-operative and landed us complete with equipment on different parts of the rocky and berg-strewn South Georgian shores. Ski and man-hauled sledges provided our transport over the glaciers and snowfields, and on the more broken-up rocky terrain, the uneconomical method of back-packing, using Everest carriers and rucksacks, had to be resorted to. Because of this, all equipment had to be as light as possible and kept down to a minimum. Food was the heaviest item and special sledging rations were used, consisting mainly of pemmican and other dried and compressed items high in calorific value. The two-man nylon fabric tents and protective clothing were the same as used on Everest. Radio communications were maintained with Great Britain by way of the transmitter at the British colony.

All the expedition members being climbers, mountaineering ranked high in the programme. No climbing had ever been done in South Georgia. In fact, only a few surveying parties have been in the interior and that only in areas adjoining the better-known



SLEDGING IN SOUTH GEORGIA

I. M. Brooker

north-east coastline. We had had high hopes of making ascents of several of the high peaks. Mount Paget, 9,200 feet, the highest on the island and located in the main Allardyce mountain range, naturally attracted us and we made it the target of our first five-week trip. The approach over the broken-up Nordenskjold glacier took seven days, before we found ourselves encamped at the base of the impressive north-east face of the mountain—a vast horse-shoe-shaped precipice, 6,000 feet in height, almost vertical and swept by ice avalanches, the whole looking rather like the north face of the Eiger. Several prospective routes on the flank of this face were attempted and explored, but all to no avail, and we got no higher than 5,000 feet. A combination of steep ice and rock, bergschrunds, avalanches, and most important of all, weather conditions, beat us. In the mountains of South Georgia it is rare to get two successive fine days, so that to reach the summit of a high peak it is necessary to find a relatively easy route which will enable the whole ascent and descent to be completed in one day rather than one requiring the establishment of a small assault camp higher up. All expedition work in the interior of this island is limited by wind and gales which occur very frequently. From calm conditions a raging hurricane of 100 miles per hour can develop within minutes, and our last trip came to an untimely end when our tent was ripped to shreds by wind force alone. Prototypes of these tents had reputedly been tested in wind tunnels to withstand wind of 120 miles per hour!

Following this rebuff on Mount Paget we turned our attention to other peaks and several fine ones were ascended—the highest being Mount Gregor, of 6,200 feet. The approach to this, across the extremely broken-up Ross Glacier, took a week and involved some rather harrowing experiences in quickly blowing-up storms, the party being caught out on the glacier without protection. This ended with myself and my companion being snow-blind for twenty-four hours following the ascent, through being unable to wear goggles in the mist near the summit. This mist came upon us some 200 feet from the top, but rather than submit to defeat, after waiting in our tracks, freezing, for nearly two hours, we literally crawled and hacked our way up the final ice-cone.

Possibly the highlight of our expedition was a three-week visit to part of the south-west coast of South Georgia. This coastline faces the Antarctic continent and is continually lashed by gales. Approach to the shore is always difficult because of brash ice and heavy surf. A sealing boat gave us a lift and tried to drop us at a point fairly

near Mount Paget, once again our target, but landing there was impossible because of the ice-bound coast so we had to be contented with a site some 20 miles to the north. This turned out to be difficult enough, and everyone got soaked in the freezing water—not a pleasant start to a sojourn on an unknown and inhospitable shore. Unfortunately the time of our landing here was only some three weeks before the end of the sealing season. The skipper of the ship named two days, on one or other of which he would attempt to pick us up, so we had to be back from the interior by then.

Taking stock of our surroundings, we found that we were surrounded on three sides by very broken-up glaciers and mountain ridges through which we would have to break, before reaching the high snowfield leading up to the plateau of Mount Paget, whose gradient we believed to be much more feasible and climbable from the south. We set off, carrying loads, and it eventually took us two weeks to break through these ramparts by way of one of the glaciers, finding a route through a maze of crevasses and bergschrunds, and at times lowering all our loads and sledges on ropes down ice-cliffs, anything up to 200 feet in height. The time factor was against our getting to Mount Paget and back in time but we hoped for the best, and the five of us carried loads slowly through the glacier (we called it Eclipse glacier) in an attempt to let two members set off on the last long sledge and ski trip towards our goal. My two companions started off on the last 15 miles of relatively easy going at a height of only 1,500 feet four days before our rendezvous with the sealers. At least forty-eight hours had to be put aside for the return through the Eclipse glacier. Slowly they gained height and got nearer, but it eventually became clear that the mountain was going to win. After eighteen hours of continuous going the party were on the slopes of Mount Paget. The way looked reasonably clear, but the top was still very distant and, of course, there might be sundry hidden difficulties. It was 6 o'clock at night, getting dark, so they regretfully had to turn back, reaching the bivouac about midnight to snatch a few hours exhausted sleep. Then followed a hurried dash back to the glacier where all members of the expedition were waiting to carry the gear up the ice-falls and down the broken ground to the shore.

The sledge, unfortunately, in the haste, got out of control and went careering downhill, to be totally wrecked against a rock buttress. Eventually all our equipment and personnel were assembled at the base camp and everybody was privately deliberating on the prospect.

of the arrival of the relief ship, or worse still, that she might be unable to reach the shore because of ice. However, not many hours later, to everyone's relief and cries of "God bless Captain Hauge," smoke appeared round the headland, and boats came towards the shore, brilliantly-handled by grinning Norwegians, to pick us up successfully. We were very happy to know that we should not have to exist on a diet of seal and penguin for a further nine months, till the start of a new sealing season.

Each part of the island that we visited was surveyed for mapping purposes and two glaciers were intensively observed, so that their rate of flow might be evaluated. I took a special interest in the bird-life and spent many days with camera and tape recorder. In addition I took it upon myself to count the island's largest rookery colony of king penguins. These totalled some twenty-five thousand birds, and they had increased threefold in the space of ten years.

It was not all work and no play. Christmas and New Year brought the inevitable reunions at the whaling stations and the British colony. The highlight was a fancy dress party at which there was a treasure hunt, first prize going to the team who procured, among other things, a penguin and an elephant seal! The prize was won in less than ten minutes after frantic searchings along the beach. Just before our departure a shooting competition with the officers from an Argentinian ship was followed by a barbecue at which the individual ration was a kilo (2.2 lb.) of beef and 2 litres ($3\frac{1}{2}$ pints) of "vino rosó"!

THE RETURN OF THE OSPREY

ALEX. TEWNION

PROBABLY few Scottish climbers have not heard of the recent nesting of a pair of ospreys (*Pandion haliaetus*) in the Spey valley. This is undoubtedly the most important ornithological event that has occurred in the Cairngorms area recently, for it marks the welcome return, after a long period of years, of a bird which was thought to be permanently lost as a British breeding species. Not since 1899 have ospreys bred in the Cairngorms region, and almost fifty years have elapsed since the last fully authenticated nesting of a pair of our native birds. This was at Loch Arkaig in 1908. It is possible that a pair or two may have bred occasionally since then, for example at Loch Loyne some time between 1910 and 1916, and another pair, almost certainly of Scandinavian origin, are said to have bred at Loch Luichart in 1926. But the people who witnessed these events so zealously guarded the birds that details were kept secret and no attempts made to establish definite proof of breeding. It seems, too, that in the early 1920's a pair of ospreys probably bred under protection in woods by the River Deveron, in Banffshire, and here again the secret was so well preserved that it remained unpublished until only three years ago.

It may be wondered why such great secrecy was considered desirable. The answer is obvious when we briefly review the past history of the species in Britain. Until about 150 years ago the osprey or fish-hawk was a common breeding bird in the Highlands; one naturalist, writing in 1832, stated that a pair or two were to be found at most lochs. The large nests were usually built in a dead tree at a loch edge, or on a rocky islet, or sometimes on a ruined building; but they were never placed close together, for, unlike ospreys in some other countries—notably in North America, where a colony of 300 pairs has been recorded—the Scottish birds were solitary nesters. Besides nesting in the Highlands, several pairs also bred at a few suitable lochs in the Lowlands and nested as far south as Kirkcudbrightshire. But only until the rot set in. Then, during the next hundred years, game-preserving and specimen-collecting were jointly responsible for the virtual extermination of this once common Scottish bird. The facts make a nasty blot on Scotland's record, and England, although it had no breeding

ospreys after the end of the eighteenth century, has equally small cause for pride—twice yearly a barrage of English guns took their toll of the ospreys moving northwards or southwards on migration.

People like Charles St John, a well-known nineteenth-century sportsman, were largely responsible for the extirpation of the bird. St John's words on the osprey, written almost a hundred years ago in his "Sportsman and Naturalist's Tour in Sutherland," make strange reading to-day: "Why the poor osprey should be persecuted I know not, as it is quite harmless, living wholly on fish, of which every one knows there is too great an abundance in this country. . . ." St John's hypocrisy knew no limits: five pages farther on he described shooting an osprey and robbing its nest. Then he lamented, "I was really sorry I had shot her."

His sorrow was short-lived. Three weeks later he was again in Sutherland, again shooting ospreys and robbing their nests of eggs and young. It is believed that after St John's visits (made in 1848) ospreys returned to breed no more in Sutherland.

Probably the best-documented osprey nest in Scotland was the one on Loch an Eilein Castle, in Rothiemurchus, which was first described in Elizabeth's Grant's "Memoirs of a Highland Lady." In Vol. 5 of this *Journal* C. G. Cash reviewed the history of the Loch an Eilein nest from the early years of the nineteenth century until the final disastrous nesting in 1899, when a third osprey intruded on the breeding pair. In the fighting which ensued the eggs were smashed, unluckily. I say "unluckily" for good reasons. During the previous fifty years the nest had been robbed on at least a dozen occasions (St John and his friend Lewis Dunbar being involved in several robberies) and a few birds shot. And the unfortunate destruction of the eggs in 1899 by the birds themselves may have proved the final straw, for, although a pair returned in 1900, they did not attempt to breed, nor did they again try to do so. Only a single bird returned in 1901 and 1902, and thereafter the visits ceased.

But although the ospreys stopped nesting in Scotland a small but regular passage of foreign birds continued, becoming more evident in the past ten years or so. The osprey is a migratory species of world-wide distribution, nesting in suitable localities in all five continents; and it is known that the birds which breed in northern Europe migrate in autumn as far south as tropical Africa. On their return in spring some of them pass across the Central Highlands, usually singly, and continue up the east coast to Orkney and Shetland.

Thence they cross to Scandinavia. *En route*, however, an odd bird occasionally remains for a few days, sometimes for a week or longer, at some particularly attractive loch in the Highlands. In this connection it is interesting to note that, although ospreys apparently never bred on Deeside, one bird stayed and fished at a Deeside loch for a whole week one spring not many years ago.

Aware that migrant ospreys had begun to frequent lochs for short periods, several ornithologists came to believe that it would be only a matter of time before a pair or two found satisfactory nesting sites and decided to stay for the season. One of these was Mr P. W. Sandeman, Honorary Secretary of the recently dissolved Rare Birds Protection Committee of the Scottish Ornithologists' Club, and an indefatigable worker in the cause of bird protection. Mr Sandeman's conviction was so strong that he erected a "cartwheel" nest-site at two different lochs to supply an additional inducement for birds to stay. These "cartwheel" nest-sites actually are cartwheels, suitably camouflaged, which are securely fixed some 12 to 20 feet up in a dead tree at the edge of a likely loch. In countries where the osprey still nests, this type of artificial site has proved a considerable attraction, and there appears to be no reason why it should not prove successful here too. So far, however, they have not been used, and as I write I learn from Mr Sandeman that one, temporarily dismantled last summer, has not yet been re-erected, although it will be in the near future.

This brings us up to the recent nesting of the Spey valley ospreys. The Spey valley lies on one of the osprey migration routes, and since it provides numerous suitable nesting sites close to lochs well stocked with fish, it is hardly surprising that it should be the first of the former breeding places in which recolonisation has been attempted. The pioneering pair were first known to breed in 1954, choosing a typical site—a pine tree beside a loch—in which to build their nest, which was discovered by the son of a well-known authority on Highland birds, Captain Nethersole-Thompson of Rothiemurchus. According to Captain Thompson, breeding was successful that year and two young birds eventually flew from the nest.

In 1955 the birds returned to the Spey valley and again attempted to breed, but this time unsuccessfully. The previous year's nest was not used, a dead pine in the Slugan Pass, near Loch Morlich, being selected on this occasion. This site later received some publicity in the Scottish press and has since become well known. The normal breeding season of the osprey in Scottish latitudes is late April and

early May, but, oddly enough, the 1955 pair were not seen constructing their nest until early in June, an abnormally late date, and no eggs were laid in it. Consequently, it is thought the pair may have built an earlier nest at some other spot, deserted it for some reason, and then built a second nest, the Slugan one, too late in the season to breed.

That may well be so, if we may judge from events in 1956. For, that year, the pair reappeared early in spring and tried to breed once more, building a new nest and laying a clutch which, later, mysteriously vanished without trace. The birds suffered some disturbance at this nest, however, and a possible explanation for the disappearance of the eggs is that they were stolen by hoodie crows at a time when the ospreys were frightened away by people wandering about in the vicinity. On losing their eggs the ospreys commenced building a fresh nest in another tree some distance away, but this second attempt at nesting was eventually abandoned and the birds disappeared.

It is to be hoped that these most recent failures do not deter the ospreys from returning and trying yet again. For ospreys are magnificent birds. Seen at a distance, they superficially resemble a small golden eagle, for their wing span measures up to 6 feet and the plumage of their upper parts is dark brown. But the markedly angled wings are narrower than the eagle's, and their snow-white under parts—which are marked only with a faint brown band across the breast—and their whitish head contrast strongly with the brown above and provide diagnostic features which prevent confusion with other large predatory birds. And their hunting habits are quite characteristic. The osprey is the only large, hawk-like bird we have which normally fishes, and when fishing it usually flies about 50 to 100 feet above the surface of the water, sometimes flapping its wings, sometimes gliding, and often hovering like a giant kestrel when it spots a fish swimming about under-water. Its plunge for prey is sometimes spectacular; it may enter the water with a mighty splash, feet first, and submerge completely; at other times it may snatch a fish from near the surface so adroitly that little more than a ripple disturbs the water. Once caught, a fish is held secure by the bird's toes, which are armed with horny spikes to grip such slippery prey.

Its fishing is not always successful, however. Last summer I watched one of the Strathspey birds fishing on several different days, and all the plunges I saw went unrewarded. Besides fresh-water

lochs, where trout and other fishes up to about 3 lb. in weight are caught, the osprey also fishes in the sea; and it feeds a little on other prey like crustaceans, frogs, young water-birds, and small rodents. But it is quite harmless to game-birds, and, in fact, to practically all adult birds, no matter what species. The bird I watched in the Spey valley gave a fair sample of the species' behaviour in this respect. It was frequently mobbed by lapwings and black-headed gulls, both singly and in flocks, yet it never once turned on its tormentors. Nor did I ever see it attempt to pursue any of the small passerines which are so abundant in the area.

There is no doubt whatsoever that a bird like the osprey will make a fine addition to the breeding birds of the Highlands. Knowing this, and aware that the matter is of interest to many mountaineers—for the birds have been nesting in a locality frequently traversed by climbers—the Editor asked me to make this contribution to the *Journal*. It has been a pleasure to do so, although the story reads a bit grimly in places—of persecution of the birds in the past, and disturbance during the present. And the future of the osprey in Scotland is still too shadowed with uncertainty to make speculation worth while; the most that can be hoped for just now is that the pioneering birds will be left in peace should they come back and try again in future seasons.

NEW YEAR IN THE RUWENZORI

JEREMY SMITH

ONE hundred years ago the map of Central Africa was a great white blank. A crude drawing of a giraffe and "Here be Pygmies" obscured the region of the source of the Nile, while the Congo basin appeared to be inhabited by ogres whose arms sprouted from above their heads. It was the beginning of an important period of exploration, when mountains so high that their summits bear eternal snows and glaciers, and enormous lakes, were discovered. Or perhaps one should say rediscovered, since Egyptian and Arab writers knew that the Nile rises in three lakes which in turn are fed by streams flowing from snowy mountains, the Lunæ Mons of Ptolemy. However, their reports were regarded as legends until Stanley was shown the snow-covered peaks in 1888, when he gave them the name Ruwenzori, the rain-maker. Several travellers explored the foothills and a few attempts to reach the summits were made before 1906, when the Duke of Abruzzi led a well-equipped expedition to the range and climbed all the major summits as well as mapping its higher regions for the first time. The Duke recognised six separate mountains carrying glaciers which he called after eminent explorers of this part of Africa; the three highest, Mounts Stanley, Speke, and Baker, form a *cirque* around Lake Bujuku where most parties make their base. Individual summits he named after members of European royal families, thus Margherita (16,794 feet) and Alexandra (16,726 feet) are the highest points of Mount Stanley and also of the Ruwenzori, while the summit of Mount Speke is Vittorio Emanuele (16,079 feet) and of Mount Baker, Edward (15,987 feet).

My own journey to Ruwenzori was one of bewildering rapidity. No sooner had I passed from the peri-arctic to the tropics than the climatic sequence was reversed in climbing to the snow-line. My companion was Tom Fletcher, a member of the Climbers' Club now living in Tanganyika. He met me at Entebbe and we drove westwards for 250 miles through Fort Portal to the native village of Ibanda, where we left the Land Rover and engaged fifteen Bagonjo porters to carry our gear to the Mountain Club's hut at Lake Bujuku. The exuberant vegetation of Ruwenzori has already received ample comment, especially from non-botanists such as myself. With the exception of man-eating orchids, every kind of vegetable unpleasantness is encountered: 20-foot-high elephant grass that slashes at the

skin as one forces a way through it, dense thickets of bamboo, thorns and nettles, knee-deep peat bogs, forests of tree heath and giant groundsel where our moulded rubber soles slithered on the moss-covered stems and roots, and perhaps worst of all was the thick shrubbery of *Helichrysum* that can soak one through at the very start of a climb.

Before I left Aberdeen I was kindly allowed to read as many accounts of the Ruwenzori as were available in the Cairngorm Club Library. I discovered that there is a relatively easy way to each summit, and that very few other routes have been made. Obviously there was abundant scope for new exploration. I learned also that there was still one unclimbed peak above the snow-line, the Great Tooth, an impressive rock pinnacle between the Elena and Savoia peaks which, according to Douglas Busk, rises 500 feet above the ridge and is festooned with icicles. His photographs certainly support his impression of impregnability.

It was dawn on Christmas morning that we set out across the Elena glacier to attempt the first ascent of the Great Tooth whose summit rose 1,500 feet above us. Our crampons bit like diamonds into paper as we traversed steep snow slopes and started up the *couloir* leading to the col south of the Tooth. It had been a bitterly cold night at our bivouac at 14,800 feet, but with the exercise and the strong radiation our numbed bodies quickly became overheated in a swelter of string vests and pullovers—an appalling lack of temperance.

One of the most striking phenomena of these equatorial snows is the development of huge cornices quite unlike those we know in Scotland. Freezing and thawing must happen every night and day in the year, and consequently the cornices become reinforced with icicles reaching enormous sizes and often overhanging 15 or 20 feet. Our gully was barred by such an ice curtain which at its lowest point was 15 feet high. While I belayed, Tom thrashed away at the icicles, showering splinters all about him, and after fifteen minutes we both stood at the col gazing westwards over an ocean of cloud and forest 12,000 feet beneath us which we knew continued uninterrupted far beyond the horizon to the Atlantic. We were just in time, for at once clouds began to roll up from the east and during the rest of the day we were in mist.

The south ridge of the Great Tooth started with a 30-foot-high wall leading to a snow-covered ledge where stringers of ice dangled in the manner that sloppy icing sugar runs down the side of a cake. The



RUWENZORI CORNICE

Jeremy Smith

rock was a good quality amphibolite schist with excellent cracks and incut holds all the way, but try as I would I made no impression on the fringe of ice at the top of the pitch. It was exhausting work, for I was not fully acclimatised to this height, and the 20 feet that I repeatedly climbed and descended were indubitably strenuous. After half an hour we decided that we were getting nowhere so, descending for 50 feet down the west side of the col, we traversed on to the Congo face where a series of ledges separated by short walls suggested a route.

The first wall was disconcertingly difficult, small sloping footholds were reached with long strides or waist-high steps assisted by the bare minimum of finger-holds. If we were to be off the mountain by nightfall the climbing would have to ease off; and ease off it did. Although the pitches were still steep, they unaccountably became furnished with big incut cracks and spikes, allowing us to make fast time for 150 feet until an almost featureless wall blocked the way. Traversing along a ledge to the left I found a chimney in the back of a corner, the lower 20 feet bulging with ice. It was the only way, so while Tom belayed to a piton, I "looked at" the pitch—that is, I climbed up for 3 feet and promptly slithered back again. Without pausing to marvel at the poor frictional qualities of ice I reached up and placed a piton at arm's length on the right-hand wall, then, clipping in a karabiner, heaved myself up for 4 feet, jammed my left foot and shoulder in the chimney, got my right foot on the piton, and I was up. Tom followed equally quickly, and while he regained his breath I lowered myself on the rope to recover the peg.

A spectator might have detected an air of jubilation, for it seemed quite plain that no further difficulties separated us from our summit—that is, if a snowy pillar on the skyline was the summit. Unfortunately it wasn't; when we arrived there we were confronted by a 15-foot-high wall cut by a narrow chimney, a strenuous pitch of about Grade IV. With my left shoulder and hip wedged in the chimney, my right foot scoured the sides for rugosities to give an upward thrust; one last jerk and my left hand curled over a chockstone. Yes, it was quite firm; an awkward pull up, a struggle to change hands, a higher hold for the left, right foot on the chockstone, and I was back in equilibrium again breathing hard. Once again a bank of snow capped the pitch. I fumbled for my ice-axe which a minute before had been the object of my curses, and driving it into the snow, heaved up and found myself on a little snowy plateau. Fifteen feet away a rocky knob rose another few feet and must be the

summit. I shouted the good news to Tom, who quickly joined me, and four and a half hours after leaving the bivouac we stood together at the top. My aneroid read 16,090 feet.

"We sat on the snow and looked at the country far below us . . . we nibbled Kendal Mint Cake." I smiled as I read on my mint-cake wrapper how Hillary and Tenzing had spent their supreme moments. Here were we doing much the same, though only occasionally could we see farther than our toes. Through gaps in the clouds we saw the two nearest peaks, Savoia and Elena; the latter rose in a tremendous rock arête that looked so utterly splendid that we descended to the col separating us from it. Suddenly flurries of snow began to fall and our axes and crampons made a curious buzzing noise. Having read in a book by a well-known Scottish mountaineer that these were the symptoms of an oncoming storm, we decided to abandon our ascent of Elena, and instead traverse it on the Congo side to the col at its north end. Something went wrong with our route-finding, and instead of reaching the required col we emerged unexpectedly at the summit of Elena. We had inadvertently made its sixth ascent.

We were uneasy that we might not be trying something rather too ambitious when, a few days later, we were leading our three porters through a jungle of groundsel and *Helichrysum* to the foot of the north face of Mount Stanley, where we camped at the site chosen by the two Germans who first climbed the face in 1938. That the first ascent was made by Germans in the 1930's, and had required a bivouac near the summit, seemed to place the route in a class with the north face of the Eiger or Matterhorn. To make matters worse, conditions were about as bad as possible when, next morning, we saw that fresh snow had fallen during the night and that most of the face was enveloped in cloud. Anyway, in the event of emergency we carried sleeping bags, and plenty of food as well as pitons, spare rope for rappel loops, and such sundries that a serious route demands.

It is a curious effect of glacial erosion that the first few tens of feet of a face are often extremely steep and smooth. The north face of Mount Stanley was skirted by just such a line of walls and overhangs through which we had to find a route. Choosing the lowest point of the wall we forced a way up 30 feet of steep rock coated with an amazing luxuriance of partly frozen lichen and moss, and where soft snow lay as a trap on every tiny ledge. The pitch was so tricky that when we were both safely at the top we thought it would be prudent to rope up; whereupon the mountain leaned back and let us gain

200 easy feet crunching up hard snow. The next crucial problem was a 20-foot-high chimney lined with dull black *verglas* and blocked by a square-cut overhang; to the left were steep slabs plastered with snow which I hoped would be firm enough to allow a long traverse to a snowy ridge high up on the skyline. For a few feet the chimney was relatively holdless, and would have been very hard without crampons to bite into the layers of ice. Then a chockstone came to hand and there was easier climbing to a small stance where the traverse could be surveyed. Beneath a couple of inches of powder was shallow but quite firm snow with a fudge-like consistency. One of the good things about the Ruwenzori is that snow conditions are readily predictable. During our stay there were between 4° and 8° F. of frost every night at 15,000 feet, and always thawing during the day. Hence until about 10 A.M. a firm snow surface is guaranteed, and conversely a soft, soupy, waist-deep morass is inevitable during the afternoon.

"Only fifteen more feet." I was nearly across the traverse which, in spite of the fine quality of the snow, the high angle and exposure made a severe pitch. Tom's warning came as I made the last delicate step to easier ground, arriving on a sloping ridge of snow. I forced my ice-axe in as a rock-firm belay and watched Tom gingerly feel his way over the traverse which was none the firmer for my passage. When he was safely with me we each took a few coils of rope, leaving about 20 feet between us, and started moving together. What a paragraph of exasperation is summarised in those words "moving together." To prevent the rope dragging along the snow where it may trip one up, or from tugging rudely at one or both climbers, one is constantly having to take in or let out rope to maintain the right tension. At the same time both hands may be needed for climbing or manipulating the ice-axe. And finally one is deprived of the frequent rests afforded by moving singly. However, when all is said and done, it is the quickest way to move over easy ground safely.

At the top of a steep *couloir* we arrived at a snowy ledge stretching right across the face at this height. My altimeter read 15,310 feet, which meant that we were near the toe of the small hanging glacier, a prominent feature of the north face which once reached would provide a straightforward route for many hundred feet. Wisps of cloud were beginning to overtake us and soon made our progress quite blind.

A monotonous and rhythmical expenditure of energy must provide its own satisfaction to long-distance runners or oarsmen, and probably

to some mountaineers. Personally I find more joy in the intermittent effort required by a difficult rock or ice-pitch. The hanging glacier provided just the kind of climbing that I have described so distastefully; every time that my crampons bit into the hard snow was a compromise between haste and restraint, a wish to get it all over as soon as possible and yet to keep a slow but steady pace. At least we were gaining height fast and I could see no likelihood of our having to bivouac. We climbed in cloud, but now and then we could see the dim outline of a buttress over to the left; soon it would fall back as a *couloir* leading up to the east ridge of Margherita. The Germans had had difficulty with the cornice at the head of this *couloir*, but we were lucky in that it had broken away at one side leaving a straight snow slope to the ridge.

For the last few hundred feet we were again fortunate in being able to follow the tracks of a South African party who had climbed Margherita only a few days before. They led us through a wilderness of cornices which would have presented real problems in route-finding, and just four hours after leaving our camp we stood on the summit of Ruwenzori.

While it had taken the Duke of Abruzzi six months to reach this point from Europe, to-day it would be possible to do it in as many days. Inevitably this must distract from the glamour of the ascent, although, except for the ugly black survey marker at the summit, there can have been little change in the fifty years that have passed. Unlike the Duke and most of his forty or fifty successors, we had almost climbed through the cloud and could occasionally see the nearby peaks Alexandra and Albert, and westwards down the cascading séracs of the Margherita glacier into the Congo. But more often all was hidden in a dazzling blanket which the perpendicular rays of the sun pierced with astonishing ferocity. At the end of a lazy half-hour our peace of mind began to be disturbed by thoughts of descent. Since we carried our sleeping bags and food there was no need to return to the camp; instead, we traversed Alexandra and began the tedious descent of 4,000 feet to Lake Bujuku. The snow had lost its surface and, floundering in waist-deep morasses, both of us fell through snow bridges, experiencing the curious sensation of our feet kicking in space while our ribs were locked in wet snow. At the Elena bivouac our South African friends greeted us with hot soup before we groped over the last lichened slabs and waded the final sloughs of foetid peat to our hut. It had been a fine day's climbing, and, as it was New Year's Eve, end of a red-letter year.

THE LUIBEG IN THE MUCKLE SPATE

L. B. PERKINS

*In Scotlan's boun's sin syne
We hinna hed anither spate
Like auchteen twenty-nine.*

THE night of Monday, August 3, 1829, has been commemorated in the literature of the North-east of Scotland, for this was the night of the Muckle Spate. The verse quoted above is from "The Muckle Spate o' Twenty-nine," by David Grant. Whilst most of the details now available refer principally to happenings in Morayshire, Nairnshire, and Speyside, great damage was done in Deeside, the bridges at the Linn o' Dee, Ballater, and Aboyne being destroyed, whilst the Potarch Bridge had two piers damaged. Due, however, to the unpopulated nature of the region, the course of the Luibeg from its sources to its junction with the Derry has received little or no mention, and it is proposed to attempt to describe the effects of the Muckle Spate on the Luibeg in this article.

The Spate of 1956 took place—again in August, but this time on the 14th of that month—after the writer had made some study of the earlier spate, and had the effect of clarifying much of the evidence which had become a little confused during the passage of 127 years, due, for example, to the growth of vegetation. It may be wondered whether the 1956 spate was greater than the 1829 one on the Luibeg. Successive spates, of course, widen and deepen river channels, and the Luibeg of 1956 could carry off water more rapidly than that of 1829, except possibly in the Rock Channel, described later. In 1956, however, the Allt Càrn a' Mhaim showed greater signs of disturbance than the Luibeg (above their junction), and it is likely that both were affected in 1829.

Again, some of the magnificent Scottish pines, which can live, according to the "New Statistical Account," to over 200 years old, must have been standing close to the Luibeg in 1829, and the roots of some of these were undermined by the flood-waters, so that the trees lean at a perilous angle, still remaining alive however. One such tree still stands a little north of Luibeg Cottage and another near the Black Bridge; these were undisturbed by the 1956 spate. Now in 1956 the remains of the bridge which crossed to Luibeg Cottage came to rest amongst trees on the right-of-way path below

Derry Lodge, and the evidence showed that these trees stood at least 4 feet deep in the water at that point. They were not disturbed, however, and it is reasonable to suppose that a greater depth of water than 4 feet existed to dislodge the trees affected in 1829, and these latter trees were not affected in 1956. At the flood-level indicator near Invercauld Bridge the highest water level in 1956 was 3 to 4 feet below that shown in 1829. It is more probable than not, then, in the writer's opinion, that the 1829 spate was greater than the 1956 one.

We now describe the Luibeg, under spate conditions, from its junction with the Allt Càrn a' Mhaim to its junction with the Derry. The first section is from the upper junction to the cleft which we call the Rock Channel.

Above the Rock Channel

Here the Luibeg lies in an almost level river valley, bounded on each side by steeply rising ground, which in parts gives the impression of a glacial flood channel, complete with moraines and raised beaches. From side to side it is filled with debris, stones up to a common size of 18 inches diameter with an occasional stone with a maximum dimension of 36 inches. According to Geikie's "Textbook of Geology," water flowing at 2 miles per hour will roll pebbles the size of an egg. It will be appreciated that these stones were all on the move in 1829, and that those left lying were deposited as the spate subsided and the velocity of the water fell. The debris below the Rock Channel shows where the remainder went.

The catchment area—bounded by the watersheds of Càrn a' Mhaim, Ben Macdhuì, the Sputan Dearg, and Derry Cairngorm—is drained by the Luibeg, and is very roughly 4 square miles, so that 1 inch of rain will send about 250,000 tons of water down the Luibeg. Three and a half inches of water fell at Luibeg Cottage during twenty-four hours in the 1956 spate, and the rainfall would be considerably higher on the hillsides, so that about a million tons of water were involved in the spate. All this water, with the vast amount of debris picked up, was directed into the Rock Channel.

The Rock Channel

This cleft, tapering gradually, sloping steeply, and of smooth surface, in the writer's opinion could not be much more efficient in receiving the debris-laden flood-waters from the swollen Luibeg

and discharging them rapidly at its outlet below. At its narrowest part this channel has a width of 35 feet at what would be the flood surface level, and that level is 24 feet above the bed where, of course, the width is less. Even the largest stones, rolled into the channel at its entrance, would be in suspension in the narrower parts of the channel, so we would, during one of the spates, have a column of water, mixed with boulders, moving at a considerable velocity, and with great destructive force.

The sides and bottom of the channel are polished and bare of vegetation. Stones lie only in pockets, and where there are bends in the channel, large boulders are piled up. Calculations of the velocity of water in the channel are not easily made, but it is reasonable to suppose that, due to its tapering cross-section, the velocity at bed-level, or thereabouts, would be sufficient to thrust upwards, at bends, or changes in cross-section, quite large boulders. Prior to 1956 one such boulder, with its longest dimension over 6 feet, was perched on the east side of the channel, but was displaced in 1956. Another, nearly as large, now rests in another position on the west.

One can only imagine the sight and sound of such a torrent, almost level with the top of the gorge, racing with sinister force and throwing up spray. The roar of the water would be offset by the rumble of boulders being rolled and bounced down the channel, and occasionally one would be seen as it was thrown clear of the surface in an eddy. It is doubtful whether this spectacle has been seen; certainly, in 1956, those in the near vicinity were more concerned with their own affairs than with the upper Luibeg. The smooth, almost polished, surface of bed and sides of the rock channel show how it has been scrubbed with debris, large and small, during spates, and also indicates the violent movement of these solid objects during their passage through it.

At its lower section the rock channel widens and terminates in a gorge whose walls and bed are of boulder clay. Whilst in severe flood this lower gorge may be filled to a considerable height, but it widens rapidly, and the changing character brings us to a different section of the Luibeg.

From Rock Channel to Allt Preas nam Meirleach

In this section, where both the Lairig Ghru paths cross, the great bulk of the debris carried down was deposited. Particularly, the bigger boulders were dropped first as the water velocity fell. The

course of the Luibeg widens rapidly, however, and it is natural for such flood waters to meander. Under successive flood conditions a series of main channels, each differing from the other, were cut in the wide bed. The Parker Bridge spanned the channel cut by the Muckle Spate, which probably differed from those formed in the spates of earlier times and which is now normally dry following another change of course.

The quantity of material deposited by the Muckle Spate was tremendous, and the varying course of the flood waters could be imagined, as one walks over the debris noting almost stagnant areas, shown by the deposition of sand, and regions of violent clashes of water where boulder is piled on boulder. It must be remembered, however, that the picture presented thus is the final picture that formed as the floods were receding. Who knows what it was like at the height of the spate?

The region of heavy flooding seems to have ended at the Allt Preas nam Meirleach, which appears to have always been a normal little burn, but it probably had its effect in diverting the flood waters to the east.

From Allt Preas nam Meirleach to Luibeg

As the river leaves the region of the Robbers' Copse its channel widens still more, so much so that, over the level ground, it is free to move as conditions dictate. The general impression is one of a large loch into which the debris would have been deposited at a rapid rate. We thus reach a region of aggradation, as opposed to the degradation which takes place under flood conditions in the river's higher reaches, above the flood channel.

The varying and erratic paths of the river continued to be formed and lost, and can still be traced, until a narrow channel is reached, about half-way between the Robbers' Copse and Luibeg Cottage. Standing at this spot, where a tiresome burn persists in making use of the path, and looking west, one can imagine a swirling mass of water, extending to the Robbers' Copse, quite wide but with deep channels where fast currents carried their load below the surface.

In the adjacent channel the evidence was that no great velocity of water was reached—debris still lies—and it is obvious that the upstream "loch" was sufficiently big to smooth out the variations in flow of water, also that on the hillsides the rainfall must have been very intense for a comparatively short period, possibly for a much shorter time than twenty-four hours.

Towards the east, and as the Luibeg veers round to the south, there is the evidence, in the leaning over of trees near to the river, that the flood waters of 1829 reached a substantial height, sufficient to partially uproot these Scots Pines. The Luibeg then, and as seen again in 1956, did not keep to its course, but flooded the lower banks to a considerable depth, and one moraine close to Luibeg Cottage was an island.

Luibeg Cottage itself stands on debris from the Muckle Spate. Due, however, to the deepening of the permanent channel, with a possible lower flood level in 1956, the water then reached no nearer than 6 feet of the barn.

There is some suggestion that the bog opposite Luibeg Cottage was flooded over in 1829, but such flooding may have been contributed to by the Derry, which was also in spate of course. The truth of this suggestion, however, is more probable than that made about a nineteenth-century frying pan, capable of dealing with at least three dozen eggs, and found cast up near Derry Lodge after the 1956 spate. The suggestion made locally was that this frying pan had belonged to Charlie Robertson, who lived at Corrour Bothy at the beginning of the century, and that it had been washed down from there by the spate! The writer can only end by mentioning the most famous literary reference to the Muckle Spate, that by Dr David Rorie, which ends:—

“ an’ a lum hat wantin’ the croon.”

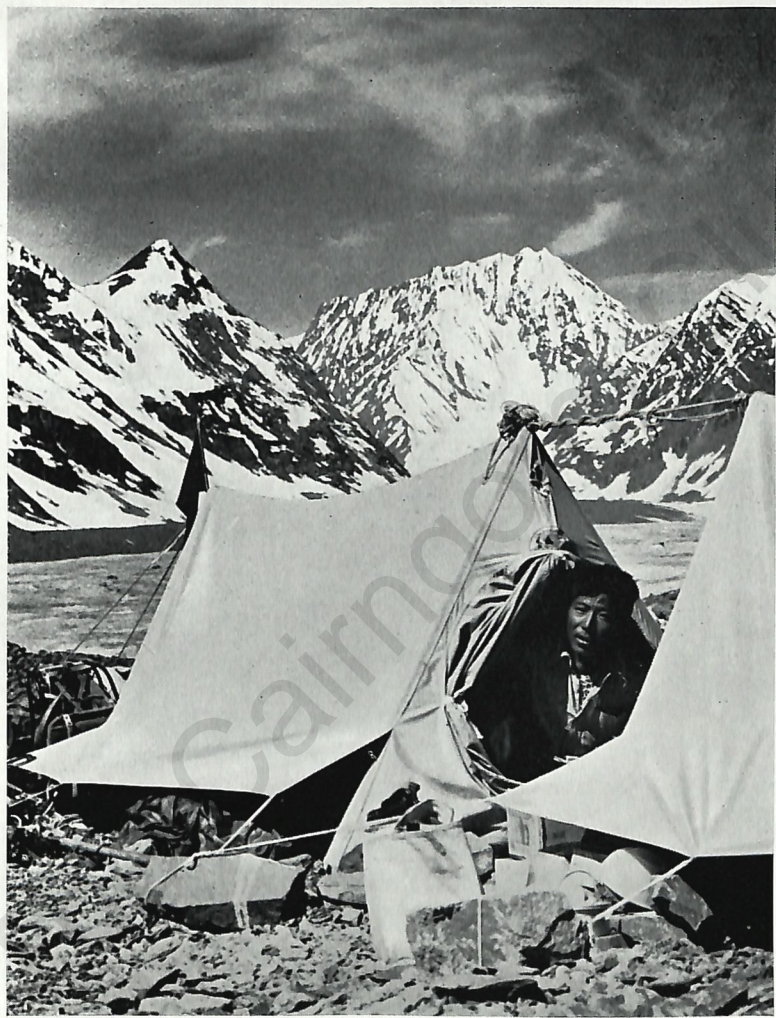
HIMALAYAN HOLIDAY

MILLCENT MCARTHUR

WE had heard at various times that there had been small private expeditions to the Himalayas, and the thought gradually grew in our minds that if others could go, why not us? Having made up our minds, not without misgivings, that we meant to go, the next thing was to find out as much as we could, and to make up a party. It did not take us long to choose our area. Central Lahoul was largely unexplored, enjoyed a dry climate during the monsoon period—the only time we could go—and was easily accessible. It lies in northern India just south of the Kashmir border and a little to the west of where it joins the frontier of Tibet. The area itself forms a rough triangle with its apex in the north at the Bara Lacha Pass. The triangle is bounded on two sides by the Chandra river and on the third side by the Bhaga river. Our intention was to go up the Chandra valley for several days' marches, then to cross the river and explore the inside of the triangle.

One evening we rang up Frank and Babs Solari and invited them to accompany us. They asked for time to consider such an astonishing proposition, but took less than an hour to decide that they were coming. As both of them are now members of the Cairngorm Club our expedition might almost be counted as a Club Meet. With the party arranged, the work of preparation went ahead. We read with avid interest the hitherto neglected appendices of Himalayan books detailing costs, equipment, food, and medical supplies. We talked to people who had been, all of whom were generously ready to help. Our friends rallied to the cause, giving away their winter underwear and their war-time kit-bags, while we made out endless lists, haunted the junk shops, sorted and packed, underwent inoculations, and, at times, wondered whether the Himalayas were worth so much work.

At last the day came when the baggage went off to the docks, and a week later Hamish and I, as the advance party, flew to Cairo in time to give us the opportunity for some sightseeing in Egypt before joining the ship which was carrying our equipment at Port Said. At Bombay we spent much time in complicated negotiations with the Customs authorities, but after a day and a half we were safely through. We collected the rest of our food, which had been ordered from a firm



Hamish McArthur

OURKIEN AT ADVANCE BASE CAMP

in Bombay, and set off for Delhi and the north. The sight of an impressive string of red-smocked coolies carrying our luggage through the station at Bombay made us feel rather important, but we felt less so twenty-four hours later in Delhi, where we changed trains, when we found that all our possessions had disappeared. Just in time the van containing them was found shunted off on to another line. Another overnight journey and we reached Pathankot, the railhead. The station wagon we had arranged to take us on to Manali eventually materialised, but much of our baggage had to go on the roof of the ordinary bus. The monsoon had broken early and the 200 miles took us five days. The road was blocked in various places, a vital bridge had been washed away, and our vehicle broke a spring. Our two Sherpas who had remained behind from the R.A.F. Mountaineering Association Expedition came to meet us, and were an enormous help in dealing with our mountain of baggage. Various bits of it had to be left behind, and as we had to walk a stretch of 6 or 7 miles we ended up with little more than a change of clothes for ourselves. We stayed in great comfort at Major Banon's bungalow at Manali, and with his help engaged two Ladakhi porters and arranged for horses. After a week our luggage all turned up, and shortly afterwards Babs and Frank arrived, having flown to Delhi. We had asked for an Indian Army officer to accompany us, and the Bengal Engineers, who are building up a mountaineering reputation, sent us Captain Kailash Goswami and, more surprisingly, his wife Tara as well. Neither of the Goswamis had been in mountain country before, but they were a great acquisition and we enjoyed having them. They were invaluable as interpreters, and we learnt much about India in talking to them.

At last the great day came for our departure. The horses turned up—twenty of them, including a mule or two and a donkey and a foal, both of which apparently came for the fun of it, as neither ever carried anything. Three men and a boy came to look after the horses, so that with six sahibs, two Sherpas, and two porters we made quite an impressive if rather ragged procession as we set off from Manali. A short march took us to the rest house at Kothi where we spent the night. Next morning was wet and misty—the horses had wandered off into the mist: the horsemen had fearful tales of deep snow on the pass of over 13,000 feet we had to cross, and it took all our determination to get the party on the move. Once over the pass, which presented no difficulty, and a little way down the other side the promised weather miracle worked and we came into bright sunshine. Our

first camp was in a delightful meadow above the Chandra river not far from Khoksar, the highest village in the Chandra valley, and the last permanent habitations we were to see for over four weeks. After a rest day we moved off up the valley in stages determined by camp sites, *i.e.*, places where grass was available for the animals. We soon had another rest day because we had a day and a half's rain and it seemed pleasanter to stay in shelter. After this we had no further trouble with the weather and the more susceptible members of the party had difficulty in protecting themselves from sunburn.

At first the going was quite good, but at the bend of the Chandra river the river which issues from the Bara Shigri glacier proved unfordable, and we had to cross the snout of the glacier itself. It was littered with debris and gravelly sludge with hard ice underneath and it was a very arduous crossing for man and beast, so we were all very weary by the time we reached the camp site.

The next day the going was easier, and because of the many halts to admire and photograph the stupendous view of icy peaks the horses got far ahead of us, and we found to our dismay that they were following a sketchy track which led up and out of the Chandra valley into the next valley of Spiti. The pass at the top was over 15,000 feet high and our efforts to chase the pack train at that altitude were unavailing, so we could only follow them. However, down the other side was a delightful camp site with ample grass for the horses who had been on rather short commons, and we decided to spend a few days there. We found a small rocky peak of about 15,500 feet which gave an excellent view of the way we were to go, and we did some survey work—having been lent some instruments by the Indian Survey. The men of the party and the Sherpas also climbed a snow peak of over 18,000 feet previously unclimbed. While they were away a party of nomads visited the camp. To our great delight they had yaks with them. The matted, shaggy appearance of the yaks was reminiscent of Highland cattle, and they seemed similarly mild-mannered. We were sorry to leave this camp site, especially as the drifts of edelweiss around it were growing bigger every day, but once more we crossed a high pass back to the Chandra valley. We now reached the point where we meant to cross the Chandra. We met some shepherds who thought we should certainly fail, especially as it was already afternoon and the glacier-fed river would be higher than in the morning. We found a place where the river split into several channels, and success with the first few emboldened us to attempt the worst one, and we made the crossing successfully. The



AFTERNOON TEA AT CAMP II (17,800 feet)

Frank Solari

water was not deep, but immensely fast-flowing and extremely cold, and we only realised later how lucky we had been to cross without misadventure. We set up Base Camp on a grassy meadow with a clear stream flowing through it. The place was so thickly carpeted with edelweiss that we had to dig it up to get even floors for the tents.

The next day was devoted to reorganisation, and then we made a reconnaissance of the glacier which faced us. First we had to cross wide stony flats to reach the ice, but the glacier itself proved easier than we had dared to hope, and we were able to take horses on to the ice without any trouble. Advanced Base was set up on the left lateral moraine at about 15,000 feet and daily contact was maintained between it and Base Camp.

Hamish and Frank remained there and the rest of us took turns to stay there. Another new peak of over 19,000 feet was climbed direct from Advance Base, more survey work was done, and then, with time running short, a move had to be made to find and climb, if possible, a twenty-thousander. It was decided to explore a side glacier which had been discovered. The two sahibs and the Sherpas, carrying very heavy loads, camped on this glacier and then found what they were looking for. The mountain, 20,430 feet in height, was one of the very few marked on the map, accurately with regard to position and height, but it was surrounded by peaks and glaciers which did not appear on the map. The first side glacier giving access to the peak needed only a cursory inspection to be rejected, but the next was more promising. A very steep ice-fall had to be climbed and took six hours of exhausting toil. Camp was pitched about 17,800 feet on a shelf which presented the first possible place, since no one was anxious to go a step farther with heavy loads in the great heat. At night the temperature fell sharply and boots froze even inside the tent. Next morning a start was made in bright moonlight, and although there was steep snow there was no real technical difficulty, although altitude made the effort tiring. After the last of a seemingly endless series of ice bulges the party reached the summit between 10 and 11 A.M. They could see into Tibet to the east, Kashmir to the north, and the monsoon clouds far to the south in India. Weather conditions were ideal, and all the party felt very well.

The descent on steep softened snow was a little tricky, but all went well. After arrival at camp a debate as to whether the party should go farther down was ended by an ice avalanche which fell over the proposed route. Well rested and making an early start, the party went all the way down to Base Camp the next day, arriving

in time for lunch. Everyone was happy to be reunited, and Tara, always an inspiration to Ourkien, our Sherpa cook, invented a new sweet compounded of chopped dates, custard, drinking chocolate, and Kendal Mint Cake. The bones of the sheep we had bought ten days before from a nomad shepherd once again made soup thickened with dahl—a kind of lentil—and if the smell was a bit “high” the flavour was rich and “gamey.” Sports were held of which the favourite was a tug-of-war with the two teams on opposite sides of the small stream. Since somebody was bound to fall in, this was a sure-fire success with the Sherpas and horsemen. A special dinner celebrated the leader’s birthday, and with remarkable foresight he had remembered to bring a white tie. Worn with a red and black checked shirt and a dense black beard, the effect was undoubtedly arresting.

Next day we rather sadly packed up and prepared to move back to Manali. We had lived together as a self-contained and interdependent community in this empty, enormous country, and the experience had made us feel that we belonged together. Perhaps especially at night, if one stood on the little slope above the camp and looked down on the cluster of lighted tents surrounded by mountains glittering in the moonlight, one was conscious of how much our safety and comfort, and even our lives, depended on the willingness of everyone to work together. This was the sort of life we had looked forward to 7,000 miles away in England, and the realisation had not disappointed us. Our Sherpas, porters, and horsemen did all that could have been expected of them, and far more. We were constantly being surprised and touched by the things that they would do for us. Bunches of flowers would always appear on our table, a hand would always be ready to take any spare clothes we shed, and the mem-sahibs were treated with a gallantry that they rarely meet at home.

We had intended to return the way we had come but our first look at the Chandra river made us think again. The unbroken fine weather had melted the glaciers and the river was far more formidable than before. Nevertheless we made the attempt, and it looked at first as if it might succeed and then suddenly one of the Sherpas lost his footing. Although still clinging to the rope handrail that had already been placed across, he was quite unable to get on his feet again. Hamish went to his help, but the same fate befell him, and now there were two people helpless in the water, and liable in a very short time to be overcome by the cold. The horsemen dashed in in a body and after a struggle managed to get both the victims to the bank.

They were so cold and numbed that they were unable to stand or do anything for themselves, so all our efforts had to be turned to restoring them to life. The funny side of the near disaster was that both victims had their trousers washed off them by the force of the water! The next morning very early we had another look, and without much discussion it was decided that the risks of crossing were too great: Our only alternative was to go the long way round to Manali, going first northwards to the Bara Lacha La—a pass of over 16,000 feet and thence joining the trade route between Tibet and India and Kashmir. Although there was a track on the far side of the Chandra valley leading to the Bara Lacha, we had no idea what difficulties might lie in store on our side. In addition to that we knew that we were likely to cross the "Inner Line." The Indian Government does not allow foreigners to wander in the frontier area bordering on Kashmir and Tibet, and has marked off a line on the map a certain distance inside their own frontier. A permit is needed to cross this Inner Line and we had none. However, we had no alternative; we had no way of telling anyone of our intentions and we knew that the longer route would mean a late arrival anyway, and that sooner or later someone would start to worry about us. We explained to the horsemen that we must go as fast as possible, and they promised that the horses would do whatever we could do! This promise was faithfully kept and we achieved marches of up to 20 miles a day. Until we got to the Bara Lacha La the going was very arduous, and we constantly marvelled at the ability of the horses to pick their way through long boulder-strewn stretches which were trying enough for us. We had more trouble with river crossings and we met a police patrol who wanted to turn us back. Fortunately Kailash was able to convince them that we must be allowed to continue and we all became quite good friends in the end. At last we reached the pass, and oddly enough the only creature to suffer from the altitude was the foal. When we stopped to take pictures of the beautiful snow and ice peaks which had come into view, he lay down, pillowed his head on a stone, and looked ready to expire. However, as soon as we began to lose height he recovered and became his usual skittish self.

Once on a good track we made good speed, passing through some of the grandest scenery any of us had seen, and came to the first outpost of civilisation—the summer settlement of Patseo. Here we found some traders, mostly from Tibet, with temporary shops which are set up during the summer to serve the passing caravans bringing wool to India and returning with tea and sugar and other necessities.

I was able to buy a vacuum-packed tin of English cigarettes which consoled me through a long interrogation by a police inspector who wanted to check on our movements. Next day we crossed a fine new bridge and thought our troubles with rivers would be over, but the very next bridge was down and the only way to cross was by means of a pulley slung on a wire rope. The horses were unloaded and departed miles upstream to find a ford, while we dispatched all our baggage, piece by piece, across the river. Each of us in turn was trussed like a fowl, attached to the pulley, and hauled to the other side. In the middle the rope sagged and the grey foaming water was unpleasantly near. The jerking of the rope and the constriction of our bonds meant that each of us arrived in a battered and breathless state, but by now we had learnt to take this sort of thing in our stride. Apart from the anxiety we felt over such delays, the flowers and the scenery were so wonderful that we were not sorry to linger.

The first village we came to, Keylang, was not much of a place, but it seemed very sophisticated to us. There were proper shops where we bought tinned pineapple and a tin of Scott's Porage Oats—the only one. There was a wireless station, and we sent off long messages to say where we were. Three more days took us back to Manali and the bliss of fresh bread for tea followed by quantities of plums, pears, and apples. Hot baths were appreciated as never before, and seldom needed as much, judging by the glacier-like sludge that we left behind us. The journey to Pathankot was by no means uneventful. The bridge which had held us up before chose the night of our return to fall down again. Mud avalanches fell over the road, and one piece of road slipped a couple of feet down a steep hillside.

Finally we reached Delhi and the acme of comfort in the Hotel Cecil. Hamish and I made a quick trip to Agra to see the Taj Mahal while the others flew straight home. Brief sightseeing in Beirut was followed by four days in Istanbul, then by Athens and Rome back to England.

Undoubtedly it was the best holiday we have ever had, and in addition we have contributed a little in knowledge by mapping and survey. The party kept extremely fit, and our medical supplies were used only for minor injuries, although we were able to give a little help to people we met on the way. Apart from our memories, the main thing we have brought back is the desire to return.

WEATHER AND SNOW ON BEN MACDHUI

P. D. BAIRD

FOR over a year the author has been making trips to the neighbourhood of our highest Cairngorm summit as part of a study of the relation of semi-permanent snow-beds to climatic conditions. In the Snowy Corrie (Garbh Uisge Mor) of Ben Macdhui there is one of these, occupying the nearly east-facing slope of the north top. It is not quite so permanent as that in the Garbh Coire of Braeriach but much more accessible from Aberdeen, and one can glissade there any month of the year, or if very enthusiastic, make use of skis.

I had hoped to have a weather-recording station established as near as possible to this snow-bed from the beginning of the snow year (about end of September), but the equipment loaned by the Air Ministry Meteorological Office was not ready until December. It includes a special Antarctic Screen, designed for the British Trans-Antarctic Expedition, which theoretically lets snow blow in and out again without accumulating and choking the instruments inside: also a special graphic anemometer recording wind speed and direction with two pens on the same chart.

The erection of the screen and anemometer tower under mid-winter conditions was quite a problem. The gear (about 400 lb. weight apart from instruments) was carried up by some willing helpers in two main lifts, December 19 and January 22. But the construction, which meant fiddling with small nuts and bolts in bare hands, was rather slow, and had to be done by stages and only when the weather was reasonable.

Temperature and humidity recorders were started in mid-February and the anemometer in early March, and visits to change graphs have been made since on an average every eight or nine days. But if the Cairngorm Club is unable to arrange for good weather on its Sunday excursions, alas, no more can I for the Macdhui visits! When conditions are good it is an hour's job to change graphs, re-wind clocks, and re-ink pens, and measure the snow-patch changes. But often in winter there was blowing snow to delay matters, and during this late miserable summer much cold damp mist with wind and rain. I think these last conditions have been more unpleasant and just as cold on the hands as were the frosts of February and March. Only twice (April 14 and September 17) do I recall performing the job in sunshine and shirt-sleeves.

One of the finest days we had was December 19, when we staggered up with the Antarctic screen—seven of us, two with the 5 by 5 foot trapdoor: an awkward brute. By the time we left the site at 4 P.M. the temperature was down to 7° F. and we had one frozen toe and one frozen finger in the party.

I just missed the thunderstorm of June 11 which did such damage to the area around Glenmore Lodge. Its curtain of rainfall was over the Garbh Choire as I climbed Sron Riach, but it moved around to the northern slopes of Cairn Lochan and Cairngorm. I experienced ten minutes of violent hail while crouching under a tiresomely thin plastic raincoat at the source of Tailors' Burn.

Most of my thirty-six visits in the year were made from Derry (other helpers have made four trips to change graphs when I was engaged elsewhere). But I have been up once from the Corrour bothy and twice from Coylumbridge: during February I spent three nights in the Etchachan bothy while finishing the construction, and in mid-July I camped in the Snowy Corrie itself while doing some painting of the equipment.

One of the ascents from the Etchachan bothy was a fine example of a climbing error. Determined to have warm feet while standing for eight hours at the site, I foolishly went up in felt-lined sealskin boots. On the gentle hard snow slope covering the Etchachan path I could get no grip, and while carrying a delicate instrument couldn't afford to slip. I was forced to cut steps with a snow shovel. Fortunately no other climber was around to witness this feat!

Sometimes the station has been hard to locate, especially in mist when snow covers all the upper plateau. By now I know the route pretty well down to individual boulders and vegetation patches! For those of you who have not found it, it lies about a quarter mile north-east of the summit, at about 4,120 feet, exactly 3,000 feet above Braemar.

So far, results confirm what we already knew—it was a horrid summer, in strong contrast to 1955 when the temperature certainly reached 65° on the summit, and there were long dry spells of sunshine. This summer the station has been in damp cloud 80 to 90 per cent. of the time and the maximum temperature was 57°. March, May, and September were rather warm months, especially the last: April, July, and August were cold—the last exceptionally so, with snow showers on the last few days. The Durham University party, who planned to survey the Snowy Corrie in detail to assist me, were



Aberdeen Bon-Accord and Northern Pictorial

THE WEATHER STATION ON BEN MACDHUI

first blown out of their camp at 3,500 feet and then visibility was so seldom good that they were unable to complete the work.

Yet the wind speeds have not been phenomenally high (average 10 to 15 miles per hour). Of course the station is in a lee (because of this the snow accumulates very greatly on the slope—blown off the summit and reverse slope): also the anemometer is only 6 to 8 feet from the ground instead of the official standard of 33 feet. But this represents the wind the climber's head has to encounter!

It is when the wind is accompanied by freezing cloud that the most troublesome conditions occur. Great accumulations of ice appear on the screen and anemometer. On March 23 I found the latter's tower a solid pillar of ice 8 feet high and one fog crystal 43 inches long was growing out from the windward corner of the screen.

The snow patch itself just failed to survive the end of 1955's ablation period. On September 21 it was still there; on October 5 it had gone, but new snow was falling and began to accumulate from about that date. This year (1956) it is in a healthier state and looks like surviving since new snow and freezing temperatures arrived on October 2.* The enormous depth to which it piles up is shown by the fact that between the end of April (maximum) and the end of September 1956 the surface went down by over 27 feet—but there was still a foot or two left.

By the time the coming winter is over we will know a good deal more about the Ben's annual climate, and be able to compare it with the records of the old Observatory on Ben Nevis which did such fine work many years ago. And I will have had a good deal of fun and plenty of exercise.

SUMMARY OF TEMPERATURE RESULTS, 1956

	Macdhui.	Braemar.	Difference.
12 days of Feb. (17 to 28)	19·2° F.	28·4° F.	9·2° F.
23 days of Mar. (9 to 31)	26·8° F.	37·8° F.	11·0° F.
Mean for Apr. . . .	25·9° F.	38·7° F.	12·8° F.
Mean for May	33·9° F.	48·6° F.	14·7° F.
Mean for June	36·8° F.	50·9° F.	14·1° F.
Mean for July	42·6° F.	53·7° F.	11·1° F.
Mean for August . . .	37·3° F.	49·9° F.	12·6° F.
Mean for Sept.	41·3° F.	51·5° F.	10·2° F.
Absolute Minimum . .	11° F. (Feb. 18)	7° F. (Feb. 17)	...
Absolute Maximum . .	57° F. (Sept. 25)	75° F. (June 11)	...

* It in fact did survive in 1956.

IN MEMORIAM

HERBERT G. POPE

WE have to record with regret the loss of one of our senior members by the death on December 29, 1956, of Herbert G. Pope, who was for over thirty years the City Assessor of Aberdeen. Mr Pope was a former pupil of Aberdeen Grammar School and served his apprenticeship as an architect in Aberdeen. He held various posts in the Valuation Department of the Inland Revenue in the north of Scotland and was engaged on valuation work for the Admiralty in Orkney during the 1914-18 War. In 1919 he was appointed City Assessor in Aberdeen, from which office he retired in 1950.

Although he never took a very active part in the affairs of the Club, H. G. Pope was in his day a strong walker and had a sincere love of the hills. One of our members, William Mitchell, has happy recollections of days spent in his company in the Cairngorms and of a cross-country walk from Kirriemuir to Braemar. They had also a holiday in Skye together which included the ascent of Sgurr nan Gillean. Writing of these experiences Mr Mitchell says: "While H. G. Pope enjoyed his visits to the hills I am sure the toils up to the tops did not interest him so much as the pleasure he got in the corries or among the screes, searching for the beautiful flora of our Scottish hills: all those flowers were his greatest love."

PROCEEDINGS OF THE CLUB

ANNUAL GENERAL MEETING, 1955

THE 67th Annual General Meeting of the Club was held in the Caledonian Hotel, Aberdeen, on November 23, 1955. Mr E. W. Smith, the retiring President, who occupied the chair, made sympathetic reference to the death of the Hon. President, Dr R. M. Williamson. Reports were given by the various Office-bearers, and the Chairman made particular reference to the improvements carried out at Derry Lodge during the past summer by members under the supervision of Dr G. A. Taylor.

The Accounts for the year to October 31, 1955, were submitted and approved, and the following Office-bearers were appointed for the ensuing year: *President*, Mr A. Leslie Hay; *Vice-Presidents*, Mr N. F. Dyer and Miss Ada A. Adams. The other Office-bearers were reappointed.

On the motion of Mr A. Leslie Hay, the retiring President was accorded a very hearty vote of thanks for his services to the Club during his three years of office.

ANNUAL GENERAL MEETING, 1956

Prior to the 68th Annual General Meeting of the Club, which was held in the Caledonian Hotel, Aberdeen, on November 21, 1956, a Special General Meeting was held to consider proposed amendments to the Constitution. Mr A. L. Hay, President, occupied the Chair and explained that, as instructed at the previous Annual General Meeting, the Committee had carefully considered the qualifications for and classes of membership, and recommended that the existing *Junior* members should henceforth be styled *Associate* members and that the term *Junior* should now be applied to those members between 16 and 18 years of age. The Chairman further explained that the Committee considered it advisable to make an increase in the subscription rate. The proposed amendments were carried by the necessary two-thirds majority, and it was agreed to accept the recommendation of the Committee that the increase in the annual subscription should not apply during the current year. A copy of the amended Constitution is being sent to all members.

At the Annual General Meeting the Reports and Accounts for the year to October 31, 1956, were approved and the following Office-bearers and members of Committee appointed: *President*, Mr A. Leslie Hay; *Vice-Presidents*, Mr N. F. Dyer and Miss A. A. Adams; *Hon. Secretary and Treasurer*, Mr J. E. Bothwell; *Hon. Editor and Librarian*, Dr R. L. Mitchell; *Hon. Meets Secretary*, Mr E. F. Johnston; *Hon. Huts Custodian*, Mr R. Bain; *Hon. Auditors*, Messrs D. Allison and G. G. Cook; *Committee*, Miss S. Murray, Miss E. A. Scott, Messrs A. D. Cameron, P. D. Baird, G. Deans, G. M. McAndrew, W. Wright, Dr G. Mathieson, and Dr B. B. Rae.

Mr L. B. Perkins, who retired from the office of Meets Secretary which he had held for the past four years, was cordially thanked for his services to the Club.

A letter from the Factor for the Fife Estates, reporting on the condition of the Black Bridge on the Derry Road, was submitted, and the Meeting authorised a contribution of fifty guineas towards the cost of repairing the bridge.

ANNUAL DINNERS

The 1955 and 1956 Annual Dinners were held in the Caledonian Hotel, Aberdeen, on the customary date, the last Saturday of November. In 1955 T. D. McKinnon told the story of the successful expedition to Kangchenjunga in the lecture which precedes the dinner. In 1956 Hamish McArthur continued the Himalayan atmosphere with an account of the small expedition to the Lahoul Himalaya, which is described by Millicent McArthur in this number. On each occasion over a hundred members and guests were present, including, in 1956, Lord and Lady Caithness, whom we were delighted to entertain in view of the facilities which the Club enjoys on the Balmoral estates. Col. P. D. Baird took ample advantage of the opportunity to talk about Factors in proposing the toast of "Our Guests"!

INDOOR MEETS

The first meeting of the 1955-56 season was held on October 13 in Provost Ross's house in the Shiprow, and members had a chance of seeing something of the excellent work of reconstruction. Col. P. D. Baird talked of Baffin Land, Norway, and the Cairngorms. On January 30 and February 23, 1956, the meets were in the Palace Restaurant. On the former occasion Mr J. Fenton Wyness showed a collection of slides of places of interest on Deeside, while the latter was a Members' Night. Miss R. E. Stark of the Ladies' Scottish Climbing Club gave a racy description of the Scottish Women's Himalayan Expedition in the the Victoria Restaurant on March 17.

The 1956-57 season opened on October 18 with a talk by Mr G. W. Murray on the Mountains of Egypt in the Palace Restaurant, where on December 13 Dr T. W. Patey described the successful ascent of the Mustagh Tower by a small expedition, all four members of which reached the summit ridge. We are greatly indebted to all who contributed to the success of these indoor meets.

MEETS AND EXCURSIONS

1955

- Oct. 16. Glen Clova.
- Nov. 13. Loch Lee.
- Dec. 16. Hill of Fare.

1956

New Year. Derry Lodge and Killin.

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|------------------------|-------------------------------|
| Jan. 22. Lochnagar. | May 13. Glen Lyon. |
| Feb. 12. Glen Clunie. | June 3. Ben Avon. |
| Feb. 26. Lochnagar. | Sept. 9. Lochnagar. |
| Mar. 18. Glen Clova. | Oct. 21. Glen Isla-Glen Shee. |
| Easter. Kinlochewe. | Nov. 18. Ben Rinnes. |
| April 22. Derry Lodge. | Dec. 9. Morven. |

The highlight of the year's activities was undoubtedly the Easter Meet at Kinlochewe, where the Club filled the hotel to capacity and spilled into annexe, boarding-house, and tent. The weather resembled or even excelled that of the Inveroran-Bridge of Orchy Meet of 1948, and at least one party on Maol Chean Dearg discarded their shirts—in March! The inaccessibility of A' Mhaighdean was confirmed, the Loch Maree ferryman proving obdurate, despite local information to the contrary—although possibly prior arrangement might have been effective. Most of the other peaks in the district were visited, and one party, transport and all, found themselves securely locked into Glen Grudie after a visit to the south-eastern Fannichs.

At New Year there was the usual gathering at Derry, while a number of members, particularly those from the south, met at Killin, where they experienced one of those evening electricity blackouts reminiscent of Hogmanay at the Invercauld in pre-war days.

Most of the outings passed off with no more than the usual quota of minor emergencies. At Glen Clova, for instance, there was considerable delay at a high level, but the meal at the Airlie Arms, Kirriemuir, was as good as ever.

The traverse from Delnadamph to Invercauld by Ben Avon, and, among the more enthusiastic, Beinn a' Bhuird also, on June 3 was a successful outing, with better weather than usually favours our visits to that area, and the party were reunited at the appointed time—one almost writes "for once"! There was also a good response for the long-distance outing to Glen Lyon, although here the rain made the projects less ambitious than appeared probable during the journey. There is undoubtedly a demand for these one-day trips away from the granite of the Cairngorms. On the other hand, for a number of reasons it proved necessary to abandon the midsummer overnight excursion to Ben Wyvis. Whether or not the members would have followed the leadership of the guide offered, or rather required, by the proprietors was therefore left unanswered.

FARTHER AFIELD

W. D. Brooker reports as follows of his trip to Scoresby Land, East Greenland:—

During July and August 1956 I was with a party prospecting for minerals in the Scoresby Peninsula. Most of this time was spent in the Schuchert Elv, a large valley running from north to south between the Staunings Alper in the west and the Werner Mountains in the east. The Werner Mountains are a small group only about 15 miles across, mostly of unpleasant sedimentary rocks and with a maximum height of 6,000 feet. In the east and south they fade into gentler mountains not unlike our own North-west Highlands. The Staunings Alper form one of the finest mountain regions in Greenland, extending for over 100 miles. Their igneous and metamorphic rocks offer excellent climbing with summits approaching 10,000 feet. In appearance they present a wild tangle of exciting rock spires rising from a maze of huge glaciers. Due to the small annual snowfall these glaciers are very slow-moving and hence remarkably free from crevasses.

Occasionally I succeeded in having a day's climbing with two other members of the party who were fairly willing, if inexperienced. In the Werner Mountains we climbed a small unnamed peak (about 5,000 feet), one of the peaks of the Erzberg (about 5,500 feet), and failed miserably through lack of time on a large

and appallingly rotten rock face at the end of a long ridge called the Weisser Rucken.

In the Staunings Alper our climbing was more enjoyable if no more successful. We had a very pleasant twenty-hour day on the highest peak in our vicinity (about 6,500 feet). Its summit ridge consisted of a succession of huge gendarmes, but we were unable to pass the last of these in a reasonable time and so had to turn back. We were more successful on two smaller virgin peaks, one of 4,500 feet and the other of 5,300 feet. The former gave a splendid climb up a 2,000 foot rock face and the latter was distinguished by its steep final tower and needle-like summit.

As a whole, the region was most attractive and I found the Arctic flora and the herds of musk oxen particularly interesting. A properly equipped climbing party could enjoy some magnificent mountaineering and reap the benefits of equable temperatures, unlimited daylight, and almost unbroken fine weather throughout the summer. Unfortunately the difficulties of access and supply are very great and the current policy in this part of Greenland is discouraging to purely mountaineering expeditions. Eventually, however, things may become easier as there is a distinct possibility of a mining settlement being established within a few days' march of some of the better peaks of the Staunings Alper.

The Alps in 1956 once more suffered from changeable weather conditions and most Club members who went there have little to report, having missed the few good spells. Gordon McAndrew was on the Gross Glockner on his only good day. The McArthurs were in Austria and North Italy for a few days before joining the Editor at Champex for a walk to the Cabane du Trient and a half-day on Tour Ronde from Courmayeur on the way home.

The Editor then went to Zermatt on August 20 for a really wet week—three afternoon lantern lectures by Walter Steinauer in the local cinema were packed out—during which he was able to congratulate James McAllan on his ascent of Breithorn, the only accessible four-thousander. There was time to investigate the changes in the Vispental, which this year were startling. Fortunately the new road beyond St Niklaus is merely a service road for the electricity undertaking at Herbriggen. In Zermatt itself the funicular to Schwarzsee is half-finished and in use for goods as far as Furri, whence runs a track carrying motor trucks beyond Staffel Alp, where there are quarrying activities on the moraine below the Zmutt. There is considerable building activity in Zermatt itself, and rumour of a chair-lift towards the Mettelhorn.

LUIBEG BRIDGE

The following account is adapted from a note by G. A. Taylor on the damage caused by the flooding on Deeside in August 1956. Dr Taylor writes:—

It is a great disappointment to report that Luibeg Bridge, which was built by the Club in 1948 as a tribute to our former President, the late James A. Parker, was demolished by floods following a storm on August 13-14, 1956. My reaction on receiving the news was one of utter incredulity, but the nature of the report indicated that no mistake was possible. The bridge was of particular personal interest, as not only was it the first of several jobs which I have enjoyed undertaking for the Club but because it had a certain technical interest: it was the first bridge



G. M. McAndrew

THE GROSS GLOCKNER

in Scotland and, in fact, at that time one of the few in the world to be built of aluminium alloy.

On the Sunday following the storm the President, Ewen, Bain, and I made haste to visit the scene. Signs of flood damage appeared at the Canadian Bridge at Inverey. Its approaches had been torn up and the bridge closed to traffic. Rather extensive damage had been sustained by Black Bridge and the previously damaged access bridge to Luibeg Cottage had been swept about a mile downstream. It was very clear that a storm of extraordinary severity had struck the valley. It seems that the main storm centres must have been on Beinn Bhrotain and in the Carn a' Mhaim-Ben Macdhuì area, since there are signs of extensive erosion on both, while a washout on the Dhaidh, a tributary of the Geldie, has been reported. This followed a severe storm about a fortnight earlier in which some estate bridges were washed away, but it is not known whether Luibeg Bridge sustained any significant damage on that occasion. The scene there was fantastically unfamiliar. Upstream, the Burn had gouged out a new course to the westwards. At the site of the bridge the bed was over three times its original width and practically central with the old bed, in which the abutments lay on their sides. The complete superstructure had been ripped away and deposited on the bank about 100 yards downstream in a wilderness of boulders, partially buried in sand, shingle, and vegetation. Large trees had been uprooted and swept downstream and a huge hole had been torn in the moraine between the Luibeg Burn and Allt Preas nam Meirleach. The devastation will be apparent for many years to come.

Examination of the bridge indicated that the deck had been carried upright and bodily downstream, since one of the concrete footpath slabs, which were not attached but simply laid in place, still rested undamaged on its supports. As the deck was being wrenched from the abutments and before the holding-down bolts snapped, the main beams were somewhat bent at one end but otherwise nearly unmarked. Extensive damage was sustained by the footway beams, bracing, and handrails. The parts were dismantled and removed to the safety of higher ground.

I understand that the Committee is determined that the bridge shall be re-erected. I believe that the girders could be straightened, at any rate to a reasonable extent, though such a job is not easy on the rough site and without powerful tools. Most of the remaining members would require renewal. I have prospected the vicinity and located a narrow part of the bed with solid rock on either side about 200 yards upstream from the old site, where I feel the bridge could be re-erected by voluntary labour and with reasonable assurance of permanence, as the flood mark at the point is clearly visible and it would be easy to keep the deck above it. Naturally the bridge would not be quite so attractive for day-to-day use, though quite a small detour is involved if a path were once defined. On the occasions of high water it would efficiently serve its real purpose.

I should mention that the west pier of Black Bridge in Glen Lui was seriously undermined by the spate and that pronounced subsidence has taken place. At the time of writing no cars, except those of residents at Derry Lodge, and that only driven without passengers and at low speed, are permitted to cross. I understand that the Estate propose to institute repairs without delay, and certainly if that is not done before the winter, irreparable damage could ensue. The Club is making a substantial contribution to the cost of the repair of this bridge in addition to undertaking the replacement of Luibeg Bridge.

MOUNTAIN RESCUE

THE Mountain Rescue Committee has just issued a booklet entitled " Mountain Rescue " which summarises the activities of the organisation and presents much valuable information regarding mountain rescue in Great Britain. The Committee was formed in 1946, as a development of the First Aid Committee of British Mountaineering Clubs, to take over funds subscribed by the clubs for rescue purposes, and to deal with all matters concerning the provision and maintenance of such equipment. Its objects, as laid down in its constitution, are:—

- (a) To provide or assist in the provision of mountain rescue equipment with medical and surgical supplies and also rescue posts in the mountain and moorland areas of Great Britain.
- (b) To keep the equipment in good repair and in an efficient state.
- (c) To assist in and encourage the formation of mountain rescue groups.
- (d) To arrange for the payment of reasonable expenses incurred by rescue parties, including the recompense of workmen who have acted as voluntary helpers.
- (e) To encourage investigation and experiment in rescue and first-aid methods and to make them known.
- (f) To further the cause and to advance the efficiency of Mountain rescue in any other way.
- (g) To raise funds and administer them for these purposes.

In 1949, the Ministry of Health, as part of the National Health Service, accepted responsibility for the cost of equipment and repairs and replacements. The Committee has nevertheless many financial obligations, and in 1950 it was formed into a Charitable Trust the better to deal with the subscriptions and donations it requires in order to continue its work.

The Committee has no legal obligation to alleviate any hardship suffered by a volunteer in the course of mountain rescue operations, but is building up an Emergency Fund to meet deserving cases of hardship. All mountaineers are invited to contribute to this fund, of which the Trustees are Lord Chorley, I. G. Charleson and J. L. Longland.

After describing the general rescue organisation and giving some hints on mountain safety, the 42-page booklet details the contents of the standard equipment and the procedure to be adopted in rescue work, covering such points as search, transport and first-aid. It includes a comprehensive list of mountain rescue posts, and of rescue parties, and recognises the part played in such work by the Royal Air Force Mountain Rescue teams. For the past few years, it is noted, almost all search and rescue in Scotland has been undertaken by the team from R.A.F. Kinloss, it having been the practice to call out teams from mountaineering clubs only when the rescue demanded special knowledge of the district concerned or presented unusually severe climbing problems. In all instances contact should be made with rescue teams through the local police.

It is interesting to note that of the 19 Mountain Rescue Committee posts in Scotland, 7 are in the north-east area, at Derry Lodge; Spittal of Muick; Braemar Police Station; Glen Doll Lodge Youth Hostel; Sluggan, Glen More, Aviemore; Gordonstoun School; and Achnagoichan, Rothiemurchus. Other

posts in the area are at Glenmore Lodge and at the Jean Smith Memorial Hut on Cairngorm.

Climbers throughout Britain are indebted to the workers who have been responsible for the organisation of the mountain rescue work, notably the late W. H. Hey and A. S. Piggott who succeeded him as Chairman after being Hon. Secretary from the beginning. Among recipients of Certificates awarded by the Committee for outstanding services are the names of Walter Elliot of Glencoe and D. G. Duff of Fort William.

Copies of the booklet can be obtained from the Hon. Secretary, Mountain Rescue Committee, Hill House, Cheadle Hulme, Stockport, Cheshire. Price approximately 6s., plus postage.

ON THE WRONG ROUTE

There has been considerable discussion in the press recently—and much uninformed comment about which we might say a lot—on the subject of the dangers of mountaineering. But we recollect no instance of an accident to a climber as a result of collision with a chamois, such as was recently experienced by a motor cyclist in St Gallen. Perhaps this is one more proof that one is safer in the mountains than on the road—or in the home for that matter.

NEW CLIMBS

DURING the past two years there have been a number of outstanding new climbs in the Cairngorm area, possibly as a result of the interest aroused by the forthcoming S.M.C. rock-climbing guide. Last year we reported the direct ascent of the Black Spout Pinnacle, and the 1956 *S.M.C. Journal* includes accounts of the Lochnagar Girdle Traverse and the Crimson Slabs route on Creagan a' Choire Etchachan.

In the following record of new climbs those already described in *S.M.C. Journal*, No. 147 (1956), are given without details of the route, except in the case of Crimson Slabs, with which two of the new climbs described here are combined.

LOCHNAGAR

Girdle Traverse.—(H.S.). T. W. Patey, A. G. Nicol, and A. Will, 2,000 feet of climbing, May 1955.

Parallel Buttress.—First winter ascent, T. W. Patey, W. D. Brooker, and J. Smith, March 4, 1956.

Tough Brown Ridge.—First winter ascent by Bell-Murray route, T. W. Patey, A. Will, G. McLeod, and A. Thom, March 1955.

Black Spout Pinnacle.—First winter ascent, Route 1, by J. Smith and W. D. Brooker, March 11, 1956.

Transept Route.—(S.). R. H. Sellers, J. White, and D. J. Ritchie, April 1, 1956. This route is on the Cathedral Rocks of Lochnagar and is the first direct ascent of this buttress. The climb commences 60 feet up from the lowest rocks and immediately beneath the groove to the right of the large tower on the left-hand side of the buttress. Traverse hard right into and up the groove till forced to traverse right on to wall. Climb the wall to ledge with piton belay at the foot of a second groove. Go 10 feet up this groove till a bulge forces a traverse for 10 feet across wall on to a rib. This rib forms the crux and is continuously difficult and well exposed for 60 feet to a good pulpit stance. An 8 foot crack is then climbed to a grassy terrace. Go up terrace trending left to the base of a final 50 foot chimney. Climb this easy but enjoyable chimney to the plateau. Although this buttress has a very bad reputation for loose rock it was found to be very sound on this route.

COIRE SPUTAN DEARG

Hackingbush's Horror.—(V.S.). J. Y. L. Hay, A. Will, J. Ross, C. Martin, and G. Adams, April 12, 1956. This is a short but very enjoyable climb on the steep wall to the left of Janus Chimney. Climb 15 feet up the groove at the foot of the ridge to a small platform. Traverse right to the crest of the arête from where a swing left on to a flake leads to the main platform. Climb the shallow depression above to the foot of an obvious vertical crack with overhanging top. Climb the crack by layback to the overhang and traverse right to the crest with the aid of pitons. Follow the ridge above until the final chimney of Janus is reached.

Anchor Route.—First winter ascent, J. Adams and R. Barclay, December 25, 1956. Good conditions. A piton was used as running belay on the final move. (2½ hours.)

Lucifer Route.—(S.). M. Scott, D. Macrae, and R. Ellis, October 21, 1956. This route lies between Pilgrim's Groove and the Hanging Dyke Route. Start immediately to the right of the Pilgrim's Groove Cairn and head straight up a groove to a platform beneath a prominent overhang (170 feet, M.). Move up the vertical right-hand wall (V.D.) and proceed up a groove above the overhang to a large block which is climbed in the right-hand corner to a grassy ledge (120 feet). Climb to the right over a detached block and up the top left-hand edge of a huge slab (D.) to a rock ledge overlooking Pilgrim's Groove (40 feet, piton belay). From here it is a severe movement to attain lodgement in the groove, from where the climb continues to the plateau (120 feet).

CARN ETCHACHAN

Crevasse.—250 feet (M.S.). T. W. Patey, M. Smith, and A. Duguid, July 29, 1955.

The Guillotine.—250 feet (V.D.). T. W. Patey and A. Duguid, August 13, 1955.

Pagan Slit.—(H.S.). R. Barclay and G. Adams, August 7, 1955.

Forefinger Pinnacle Direct.—120 feet (S.). D. Macrae and G. Faulkner, August 5, 1956. Start at the lowest pinnacle rocks in the gully which lead to a platform at the left-hand side of a vertical wall. Move up the edge and traverse right to a shelf (running belay). Twenty feet of hard climbing to the right of a prominent crack leads to the final pitch. This pitch, 25 feet up a shallow gully, overhangs slightly at the bottom and is deficient of good holds. Combined tactics were used and a piton inserted in the wall from which 10 feet of strenuous climbing led to the pinnacle ridge. Nailed boots worn. There are rumours of a previous ascent—possibly not so direct—but no published account is known to the Editor.

CAIRNGORM

The Relay Climb.—600 feet (V.S.). T. W. Patey, August 14, 1955.

The Escalator.—(M.). On Hell's Lum Cliffs, A. G. Nicol, T. W. Patey, and Miss E. M. Davidson, September 30, 1955.

CREAGAN A' CHOIRE ETCHACHAN

The Corridor.—(S.). J. Y. L. Hay, A. Crichton, and W. Christie, July 21, 1955. Second ascent (more direct) (V.S., vibrans). T. W. Patey and A. Duguid, August 13, 1955.

Juniper Buttress.—First winter ascent, T. W. Patey, A. Will, M. Smith, and G. Adams, February 27, 1955.

Quartz Vein Edge.—First winter ascent, J. Y. L. Hay, G. Adams, and A. Thom (all three shared leads), December 29, 1956. Hard snow ice throughout except for the final wall which carried a heavy coating of fresh snow. Difficulties were fairly continuous, the final wall, climbed in the dark, providing the crux. (3¾ hours.)

The Red Chimney.—(H.S., vibrans). J. Gadd and Mrs Gadd, July 1955.

The Crimson Slabs.—400 feet (V.S.). T. W. Patey and J. Y. L. Hay, September 4, 1955. A great sheet of smooth red slabs to the right of the prominent Red Chimney is seamed only by two long and roughly parallel grooves. The one on the right was the selected line and it provided one of the hardest climbs in the Cairngorms, very strenuous and sustained. The groove, or *dièdre*, goes straight up for over 100 feet and culminates in a forbidding overhang. Above this, easier heather grooves lead to the topmost slabs. Three pitons were used on the actual climb, more for safeguard than direct aid, though they served for both, and a repeat ascent may clean things up. A further piton was used on the top slab. Steep scrambling and an awkward traverse from the right lead to the foot of the great *dièdre* 80 feet up. This is an inch-by-inch struggle throughout. For the first 20 feet the corner crack admits a leg. Then for 20 feet the groove is grass-choked and slightly harder. In the next section the crack is clean and admits only fingers and toes (socks used). Here two pitons were used in a crack on the right wall, and this proved the hardest struggle (V.S.). More hard climbing (V.S.) up to a perfect belay but poor stance immediately below the overhang. Surmount the overhang by an awkward move round the bulge and step left (piton, S.). Regain the grass groove above the overhang and continue upwards without further ado, or traverse left at obvious ledge and climb similarly easy groove farther to the left. (It would be possible here to traverse across on to Flanking Ribs route and avoid the Upper Slab.) All routes converge on a good platform below the last slab, where a descending ledge goes down to the right. Climb the slab by a mossy crack slanting right (M.S.) (one piton used—unnecessary if some gardening performed). The last pitch then goes straight up on the left on good holds.

The Crimson Slabs.—(Direct Start) (H.S.). J. Y. L. Hay and G. Adams, September 23, 1956. This pitch provides a much finer start to the climb than the traverse in from the right used on the first ascent. Start at the grassy alcove directly beneath Djibangi beside an obvious right-angle corner. Follow an ascending line rightwards for 30 feet to beyond a shallow groove. Step left into this groove and escape right at the top. Easier climbing leads to the large ledge at the bottom of the main *dièdre*.

Djibangi.—400 feet (V.S.). Lower section, climbed by J. Y. L. Hay, A. Will, and G. Adams, April 10, 1956, completed by J. Y. L. Hay, R. Wiseman, and A. Cowie, July 29, 1956. This route is the counterpart of the original Crimson Slabs route and follows the line of the left-hand *dièdre*. It is comparable in severity and probably offers a finer climb. Start at the grassy alcove directly beneath this *dièdre* and follow a diagonal crack leftwards to the large platform overlooking Red Chimney. Trend right and climb a small corner set in the middle of the slab until a stance in the *dièdre* is gained 90 feet above the platform. Work up the corner to an overhang (piton), then continue up the corner (piton) to a stance on the rib on the right. This pitch gave 120 feet of continuously hard climbing and was the crux. Ascend easy grassy grooves to the final slab which is climbed by the last two pitches of the Crimson Slabs route. Two pitons were used for direct aid, but they may well prove to be unnecessary.

BRAERIACH

Ebony Gully.—(Coire Bhrochain) (V.D.). J. Y. L. Hay, September 7, 1955.

West Buttress.—650 feet (Direct Route) (S.). A. Stevenson and J. Y. L. Hay, July 19, 1955.

Domed Ridge.—Winter ascent, A. G. Mitchell and W. P. L. Thomson, April 9, 1955.

The Culvert.—(Garbh Choire Dhaidh) (S.). R. H. Sellers and G. Annand, July 3, 1955.

Boomerang.—(Garbh Choire Dhaidh) (V.D.). R. H. Sellers and G. Annand, June 1955. Immediately adjoining the gully dividing Helicon Rib from the main face is a small arête. The climb starts in the groove behind this. Climb 70 feet first on an easy angled groove then a steeper crack to stance; then 80 feet over water-worn rocks on good holds to a grassy ledge; next 110 feet, finishing in a 15 foot wall beneath another wall in a recess. This wall can be avoided on the right but should not be missed, as it gives the best pitch on the climb for 80 feet. Then 30 feet broken rock to the top.

BEINN A' BHUIRD

The Carpet.—350 feet (Coire-na-Ciche) (V.S.). F. Malcolm, A. Thom, G. Malcolm, R. Barclay, and G. Adams, August 1955.

Slugain Buttress.—First winter ascent, G. Adams and D. Macrae, February 10, 1957. The normal summer route was followed on *verglas*-covered rocks. Starting at the right-hand side of the buttress a move was made to the left up an icy corner followed by a 15 foot hand traverse to a rib which led to a shelf and belay. The buttress was traversed right and then left to the crest which was climbed to below the apex. Here a 20 foot *verglas*-covered groove proved to be the crux, and a piton had to be inserted for direct aid half-way up. From here 250 feet of continuous step-cutting on steep frozen snow led to the plateau. (4½ hours.)

Tantalus Gully.—First winter ascent, M. Scott and R. Ellis, February 10, 1957. The first pitch was a 45 foot ice wall (2 hours); the rest of the gully was straightforward but required step-cutting all the way. (3¼ hours in all.)

SGORAN DUBH

No. 5 Buttress Gully.—First winter ascent, two parties, T. W. Patey and A. Beanland; L. S. Lovat, J. Y. L. Hay, and Miss E. M. Davidson, January 2, 1956.

STACK POLLY

In the course of a holiday in July 1956 Peter and Pam Howgate made a route on Stack Polly which they believe to be new.

Juniper Ledges.—(D.). Take a direct line up the south face of the West Buttress. Start 150 feet right (east) of and about level with the top of Baird's Pinnacle. There is a cairn on a flat ledge to the right of the start. First ascend walls and ledges, moving slightly left to a juniper-covered ledge beneath a prominent flake which juts out like the bows of a ship. Thread belay at the base of the flake (80 feet), move left on to a block, up the wall above, over the rib to the right into a recess (45 feet). Move a few feet right and up to another juniper-covered ledge (35 feet). Finally, climb the rocks above in two or more pitches and up a chimney with a through route behind a chockstone just to the right of the similar chimney on the ordinary route up the buttress.

NEW CLIMBING BOOKS

- “The Ascent of Rum Doodle,” by W. E. Bowman. (Max Parrish, 1956, 10s. 6d.)
 “White Fury,” by Raymond Lambert and Claude Kogan. (Hurst & Blackett, 1956, 18s.)
 “Give me the Hills,” by Miriam Underhill. (Methuen, 1956, 25s.)
 “The Ben Nevis Race,” by Charles Steel. (C. W. S. Steel, 1956, 1s.)

“The Ascent of Rum Doodle” is a satire on the many accounts of mountaineering exploits in the Himalaya which have appeared in recent years. It starts promisingly enough, but, to your reviewer at least, it did not quite maintain its early sparkle and laboured a little over the final 10,000·5 of the 40,000½ feet which Rum Doodle boasts. But we must accept the undoubted facts that the objects of the satire thoroughly deserve it in many instances, and that good humorous writing on mountaineering is uncommon, and therefore give this book the welcome it deserves. A few of the resurrected Victorian illustrations produce a chuckle, as do certain of the records of the commissariat with its 3,000 porters and 375 boys, later reduced to 153 porters and 19·125 boys, reminding one of another famous ascent—of the Riffelhorn.

“White Fury” is a translation by Showell Styles of “Record à l’Himalaya,” describing a Swiss-French expedition in 1954 which was rather beset by misfortunes. It succeeded neither on Gaurisankar nor Cho Oyu, its failure on the latter being all the more bitter because Tichy’s small Austrian party made the first ascent when they were encamped at the base. The book gives the impression of a party which never really got together, despite most praiseworthy efforts by the two authors. This impression may be fostered by the mode of presentation, in which the authors in turn give several overlapping accounts of the progress of the party. It is surprising, too, in view of the reports from various sources about the better Sherpa relations which exist in continental rather than British expeditions, to be left with the opposite impression. One never really seems to get to know the Sherpas here, as they are discussed very impersonally.

“Give me the Hills” is a mountain autobiography which seems even to have something of the Winthrop Young character about it. In the 1920’s and 1930’s Miriam O’Brian, with her guides Angelo Dimai and Adolf Rubi, or unguided with all-female parties, was making ascents in the Alps whose stories provide good reading. They include the first all-women ascents of the Grepon and the Matterhorn. In her native America, with her husband Robert Underhill, she reports exploratory climbing in Idaho and Montana, but somehow it is the unusual ascents in better-known places that hold the interest. There is, for instance, that first ski traverse from Gressoney to Zermatt *via* the Margherita and the Dufourspitze, despite the attentions of Italian frontier guards. This is one of the books where we find the proper relationship between guide and tourist—one which is barely possible now for most climbers, what with rota systems and brief holidays.

“The Ben Nevis Race” is a forty-page booklet which details the figures recorded in the numerous timed ascents since 1895. Climbing, or rather going up and down, against the clock scarcely comes within the limits of true mountaineering, but the men who make the summit of the Ben and get back again to Fort William within two hours, or for that matter the girls who do it in a little over

three, would obviously make reasonably good hill walkers with proper training! They might not raise the ire of the Meets Secretary as often as some of us do at present. It seems a pity that so fine a mountain as Ben Nevis should be subjected to record-breaking of this nature.

CLIMBING JOURNALS

- Alpine Journal*, Nos. 291-293.
Scottish Mountaineering Club Journal, No. 147.
Climbers' Club Journal, No. 81.
Rucksack Club Journal, No. 49.
Fell and Rock Climbing Club Journal, Nos. 49, 50.
Cambridge Mountaineering, 1956.
Oxford Mountaineering, 1956.
American Alpine Journal, 1956.
Iowa Climber, 1956.
Appalachia, Vol. XXX, No. 4; Vol. XXXI, Nos. 1, 2.
New Zealand Alpine Journal, 1955.
Journal of the Mountain Club of South Africa, 1955.
Club Alpino Italiano, Sez. di Milano, Boll. Mensile, 1956.
Wierchy, 1955.

The Fell and Rock Climbing Club has just reached its jubilee, and celebrates the occasion with a number of its journal which does full justice to the event. One hundred and fifty pages of text and fifty plates serve to relate and illustrate the history of the Club and give some impression of its home ground, the English Lake District, an area which is, in fact, detailed in its full title. Apart from eminently readable reminiscence by F. H. F. Simpson, T. Howard Somervell, Dorothy Pilley Richards, and Lord Chorley, there is an excellent account of the Lakeland Landscape by F. J. Monkhouse and a note on some Lakeland trees. The fact that the journal is numbered 50 suggests an admirable regularity of publication for which all nine editors are to be commended, in view of the high standard which this journal maintains.

In No. 293 of the *Alpine Journal* pride of place is given to an account of the Swiss Himalayan expedition of 1956 which was so amazingly successful, making the first ascent of Lhotse and putting two parties on the top of Everest on successive days. They apparently found snow conditions better than in 1953 and had reasonable luck with the weather, well deserved in view of previous Swiss experience on Everest. In this number there is also J. M. Hartog's account of the ascent—or better, climbing—of the Mustagh Tower, Hamish McArthur's technical and topographical account of the Lahoul area, and an article on mountaineering in Russia. In the two earlier numbers of the *Alpine Journal* under review will be found George Band's description of the ascent of Kangchenjunga and Monica Jackson's account of the Scottish Women's Himalayan Expedition, to cite only two items which may interest our members particularly, as they have been described by other speakers at our own meetings.

Cambridge University Mountaineering Club, too, has reached its jubilee. The edition which it has produced to celebrate the event is more concerned with the present than the past, although there are a few commemorative notes, including

one by Geoffrey Winthrop Young on the days before the Club. Although the Oxford Club dates only from 1920, *Oxford Mountaineering* also carries an article on the first ten years. In the past year its activities appear to have been concentrated in the Alps.

In the *Scottish Mountaineering Club Journal* Tom McKinnon and Betty Stark give their own accounts of the expeditions about which we have already heard, and there is a thorough consideration by Dr Guy Barlow of the possibility of seeing any of the Cuillin peaks from the Cairngorms. The Saddle and other Glen Shiel hills are the critical obstacles, and it seems probable that, except in conditions of abnormal refraction, the most hopeful stance for the would-be observer is a little south of the Cairn Toul cairn, whence a glimpse of Sgurr a' Mhadaidh (south-west peak) might be obtained. From Macdhuì the Cuillin are hidden by the Glen Shiel Mountains 64 miles away.

Once again the allotted space has run out before the pile of journals is much reduced in bulk—they are all in the Club Library for members to read and enjoy at leisure.

ADDENDUM

MR J. GRANT ROGER regrets that the following item was omitted from the beginning of the section entitled "Oceanic Northern Element" on page 64 of the article "Flowering Plants of the Cairngorms" in the previous number of the *Journal*:—

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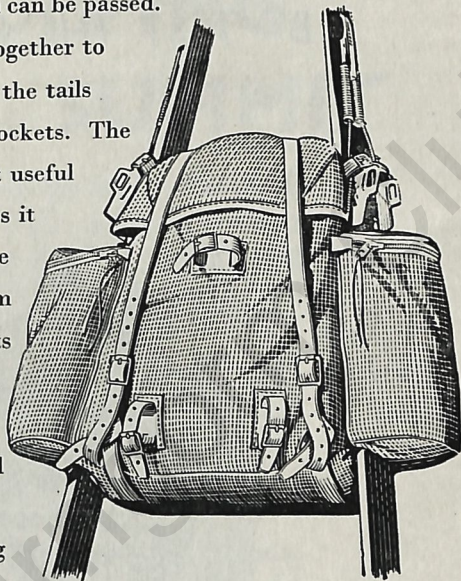
ERRATUM

C.C.J., Vol. xvii, p. 95, line 1, for "Lord Macmillan" read "Viscount Bryce."

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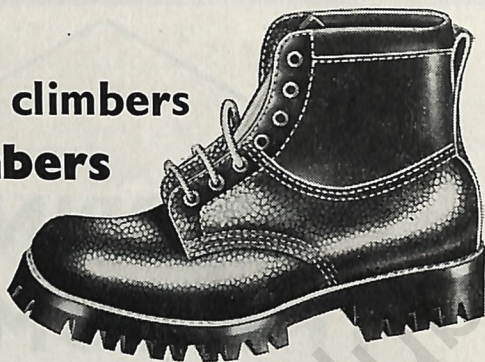
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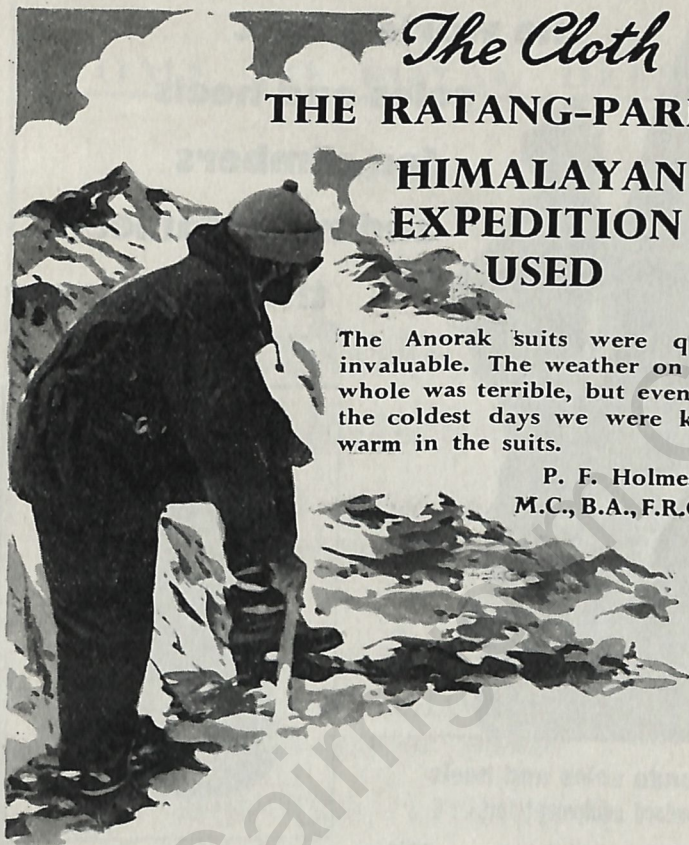
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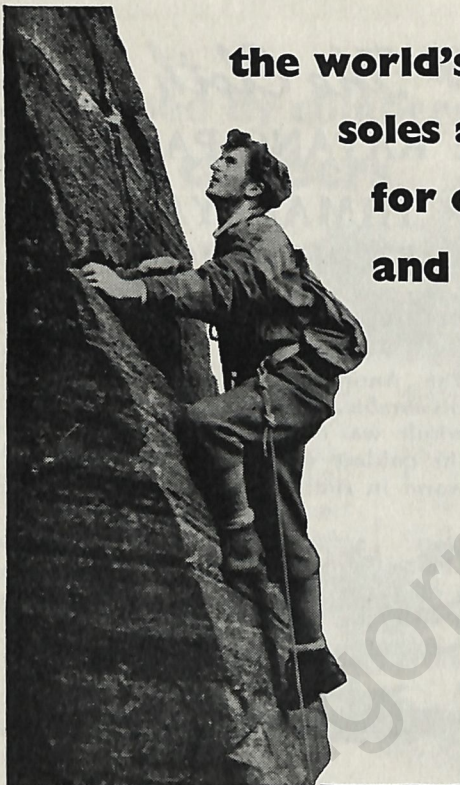


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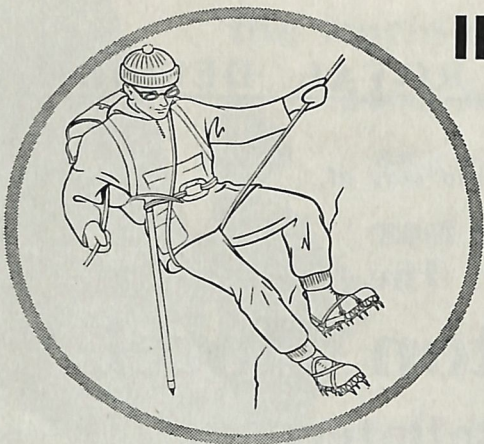
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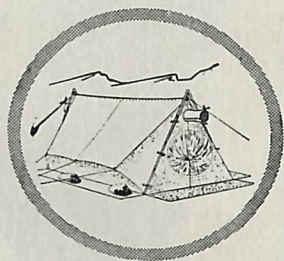
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