Letter from . . . Dunedin

Winter high country

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British Medical Journal, 1979, 2, 779-780

It was a beautiful morning. I watched idly, without any anticipatory interest, a pretty little girl with long blonde hair, probably about 10 years old, coming up the pommer tow. Suddenly my attention awoke as a brilliant déjà vu flashed on to my cortex. She had let go the pommer that critical moment too soon, and thus failed to crest the little extra rise that gave on to the plateau at the end of the tow. She lost momentum, slipped back, and fell in an appalling tangle of skis, poles, and ineptitude. How my sympathy went out to her! What came next revealed a deep feeling for which there never could be enough sympathy. "Bugger these bloody skis!" she enunciated with a heart-felt vehemence. Gentle reader, do not think ill of that mite and her intemperate language; think ill of me rather, that with my poor pen and paper I can convey to you but the superstructure of words and not the foundation of emotion. I could afford to be faintly, only faintly though, superior. After all, I could now come up the pommer without falling off, and even ride without holding on—most of the time.

You may wonder why I should write to you of skiing as I take in the pleasant light of an exquisite sunset in the closing hours of what has been a sweltering Christmas Eve. The fact is that I had been idly fingering that tender spot where the medial ligament inserts into the tibia, and recalled the evening last August when I first learnt why bindings need to be able to release the ski when one falls. There is a safety strap that retains the ski to the ankle after the binding has released, for a rogue ski on the slopes can be very dangerous. You will recall the story of the motorist who commented laughingly upon some poor chap's misfortune as a wheel rolled past him down the hill? Well, strap or no strap, it can happen to the less than best skiers too. It is embarrassing. I do not speak for myself, you understand, but, despite certain legislation that applied with rigorous logic would deprive Charles of his priority, one still feels some responsibilities, doesn't one?

It was a black wet night the first time we motored into skiing country, an area unknown to us. By the time of arrival, we were inquiring for the motel in a blinding snow storm. Of the many attractions of New Zealand, one is the remarkable proximity of contrasting geophysical features. From the east coast of the South Island across the plain of Canterbury, it is but 25 miles to the skiable mountains. From the metropolis of Christchurch, the crow flies 50 miles to Mount Cook, permanently snow topped at 12 000 feet with several accessible glaciers sweating from his brow.

It is from the massif of the Southern Alps that the glaciers of Franz Josef and Fox come down to only 600 feet above sea level

on the west coast. One's first sight of a glacier is an awe-inspiring experience, raising a sensation, an emotion, almost of fear of this incredibly powerful monster, even though couchant. One knows of its power, for the smooth steep rock walls of its ancient bed speak of erosive powers over years. That these powers are still working is witnessed by the curious pale grey opalescence of the glacier-fed river water. It is not until one has seen the transmitted light in an ice wall, or in fractures in a glacier, or even occasionally in a deep print in virgin snow, that one really knows what an exquisite colour is "ice blue."

The next morning of that novice weekend was cloudless and windless, of a breathtaking blue and white that only South Island winters can produce. There was too much snow at Mount Hutt, the access road was impassably deep. We motored off, through the eastern foothills, to discover Round Hill by Lake Tekapo. One searches for words to describe the scenes of these lakes, Tekapo, Pukaki, and Ohau, cradled in the awesome magnificence of the mountains. The only words one finds are "tall, beautiful, snow and ice covered granite, blue water, cloudless sky," and they are so many litotes to apply to the breath-taking magnificence of Mount Cook leading his ranks across that western horizon. An army of rock-headed giants picking their way on grass feet round the boulder plains of ancient river beds.

In those days at Round Hill it was easy for the beginner. The simple rope tow gave one a quarter-mile run down to a fine terminal snowbank. You may not realise what a perverse, single-minded wilfulness can be adopted by a pair of skis. Their liability to bolt is as unpredictable and uncontrollable as a corn-fed horse. The solution is the same: one stays with it until they stop, or one falls off. But that year at Round Hill I attained, transiently, the immunity from the fear of fear, which is the whole secret of successful skiing. There was a three-foot high, very deep bank of snow at the bottom that provided an efficient and reasonably comfortable, if precipitate, means of arrest. Who needed the manoeuvre known as a snow plough which hurt my knees and in any event resulted only in crossed skis and a nose plough? We enjoyed that day. And felt confident of the morrow when the way to the internationally recognised fields of Mount Hutt would be open.

The road up Mount Hutt is remarkable. Wheel chains are a condition of motorised entry, for one ascends 5000 feet of tortuous, probably icy, mountain road, and that is only to the car park at the bottom of the snow field. There is always a breath-taking, eye-closing drop on one side or the other. In a couple of places the road crawls on its hands and knees along a spine. It was off one of these last winter that a car was blown, tumbling its passengers 1000 feet down the mountain side. With achievement of the lower ski slopes there, my complacency faded. I discovered that that welcoming snowbank was not a universally provided amenity. The alternatives were not encouraging, either. To my left, a line of skiers ascending the tow; in front, the car park, full of a lot of hard-looking motor cars on a stoney plateau; and to the right was a most inviting edge to nothingness. My solution

to the problem was self-evident by later in the day. My friend commented on "washday bottom, all white and wrinkled" as he eyed my wet trousers.

In subsequent seasons I solved the wet trouser problem also. Plastic overtrousers not only prevented the ignominious retreat into the drying room each night. The conventional gluteal slide carries one five or ten yards, but with plastic overtrousers the slip value is significantly improved and contributes substantially to progress and the efficiency of a downward run. In later years I went right to the top of Round Hill. The panorama was unforgettable. The 11-mile length of the lake, an exquisite blue in the afternoon, lined by the grey of the mountains, and behind them, peeping shyly from this view, the very tip of the double peak of Cook. Difficult to believe that those two rocky corners are separated by a mile of spine.

One day I came all the way from the top without once resorting to the gluteal slide. You will recall the story of the country parson whose medical wife sat her membership with repetitive obsession over the years? When she was finally admitted, the consequent aimlessness became such a millstone to them both that the distressed cleric begged the college to withdraw the laurel that she might regain her *raison d'être*. Have you ever wondered what would be the outcome, twenty years later, of a further attempt of the already successful aspirant upon the intellectual face of that edifice in Regent's Park or Queen Street? Well, so it was on the hill—back to the nursery slopes.

Now when one mentions parrot, one sees either Robert Newton standing on one leg with his bright green friend, or one of those monstrous blue and yellow chaps from the Amazon. So you might have difficulty thinking of anything as incongruous as a "mountain parrot." The kea refuses to live much below the tree line. He breeds in the scrub and tussock at 4000 feet and over and is quite at home in the snow. It is an incredibly tame animal, an inquisitive and voracious omnivore. Their justifiable reputation for destructiveness is rivalled only by the much less justifiable reputation as sheep killers. The rather ill-established habit of keas sitting on the back of sheep and pecking out the lumbar fat has appeared in the technical reports as an example of

a renal biopsy technique. In fact there is scant evidence that they are "sheep killers," but knowing their inquisitiveness, I can well believe what a fascination picking over and stripping off the woolly covering of a sheep would hold for them—provided the sheep sat still. By the mountain walker's huts are boxes, with firm-fastening lids, labelled "Kea proof box" in which the wise walker leaves his boots overnight. Otherwise, if the boots are to be found in the morning, the laces will certainly be missing and the lining shredded. The bird's appearance is no less remarkable than its behaviour. It is a dull dun green colour, but throw bread on to the roof of your hut, and there is a flash of bright orange flaming out of the axillaries with a scarlet afterburn from the rump. The subtle luminescent chalk blue of the primaries really needs to be stopped on film to be seen properly.

How can one close an account of the high country, with its peaks and clouds so beautiful but so treacherous in storm and avalanche? Remember that, like all friends, it deserves to be treated well, and with respect. Then you will get the same welcome from the land as from the people, and a pressing invitation—one you will not be able to decline—come again.

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And if anyone feels he has been deprived of medical academy in this letter, I will propitiate him too. I will mention a senior surgeon who ripped a hamstring half way down the run, and was officially rescued on the blood wagon. He got rather less sympathy from his colleagues a year later when, on an annual consultative trip to Tahiti (that I should be so lucky), an Achilles tendon was ruptured—playing tennis. And if you want personal experience, well I was asked to see a girl with a painful ankle, lying on the back seat of a car. I had been identified to my trade because of the hospital car-park sticker on the windscreen. Since her soliciting companion was one of a group of burles who had just lifted our front wheel out of an axle-deep mud hole, I had no moral choice but to accept the invitation. She did have a painful foot, which was swollen, but she didn't have dysuria. I therefore advised rest until she saw her own doctor and could get an x-ray film—and left quickly.

What is the aetiology of Tay-Sachs disease, and is there any treatment?

Tay-Sachs disease (amaurotic familial idiocy, cerebromacular degeneration) is an inborn error of lipid metabolism transmitted by a single recessive gene. The clinical features are produced by excessive accumulation of GM₂ gangliosides in the brain because of the absence of the enzyme hexosamidase A. The disease begins in infancy and leads to death in a few years, with mental deterioration, blindness, and spastic paralysis. It is common in Ashkenazi Jews, but not exclusive to them. Carriers may be detected by examination of the blood for hexosamidase activity, and findings on amniocentesis can determine if the fetus is homozygous. As there is no treatment for the established disease, termination of pregnancy is advised for an affected fetus.

Is there any evidence to link the occurrence of arthritis with particular climatic conditions?

The quick answer is No, but there are around 180 varieties of arthritis,¹ and local conditions—whether they be infective, dietetic, or racial—may well play a part in some cases. The symptoms of rheumatoid and osteoarthritis may well be aggravated by cold, damp, and dark skies, but these factors also lower the spirits and cause depression and melancholy, which certainly increase the aches and pains even if the underlying arthritic condition is unaffected. Lawrence,² in his authoritative book *Rheumatism in Populations*, devotes chapter 16 entirely to this large and complicated subject. There is no doubt (p 505) that rheumatic complaints are a more important cause of incapacity in northern European countries such as Scandinavia and

Britain than in central Europe, the sunlit Mediterranean countries, or the USA, but racial and other factors are of equal importance. Sunlessness is certainly of symptomatic if not of aetiological importance.

¹ Huskisson, E C, and Hart, F D, *Joint Disease*. Bristol, J Wright, 1978.

² Lawrence, J S, *Rheumatism in Populations*. London, Heinemann Medical, 1977.

How is prenatal chromosome analysis performed? Are the cells in the liquor amnii examined, or what?

Prenatal chromosome analysis is carried out on fetal cells found in amniotic fluid. The fluid is obtained, after ultrasonography, by amniocentesis at about 16 weeks of pregnancy. After about two weeks in tissue culture, adequate growth of fetal cells is obtained, when the chromosomes may be stained and examined microscopically. This procedure is now standard in regional chromosome laboratories, which will successfully analyse fetal chromosomes in over 95% of amniotic fluid samples referred. The main indications for amniotic cell chromosome analysis are maternal age (38 years and over), women who have previously borne a fetus with Down's syndrome, rare inherited chromosome abnormalities, and fetal sexing when the mother is a carrier of a sex-linked disease. Amniotic fluid alpha-fetoprotein assay for the detection of fetal neural tube defect is routinely performed on all samples.

¹ Steele, M W, and Breg, W R, jun, *Lancet*, 1966, **1**, 383.

² *Intrauterine Diagnosis*, Birth Defects: Original article series VII/5, ed D Bergsma. The National Foundation—March of Dimes (USA), 1971.

³ *Antenatal Diagnosis of Genetic Disease*, ed A E H Emery. Edinburgh, London, Churchill Livingstone, 1973.