

Historical vignette: Harvey Pirie (1879-1965) and the Falklands

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Summary

Dr James Harvey Pirie was a bacteriologist, orchid grower and stamp collector of note in South Africa for nearly 50 years. Shortly after receiving a science and medical degree at Edinburgh, he joined the Scottish National Antarctic Expedition to the Falkland Islands and Antarctica from October 1902 to July 1904, returning via Gough Island and Cape Town.

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In 1918 the Scottish bacteriologist James Harvey Pirie joined the South African Institute for Medical Research (SAIMR) on Hospital Hill, Johannesburg. Founded 6 years previously in the building designed by Herbert Baker, the institute's primary objective was to conduct laboratory investigations into human diseases. Pirie became deputy director, from 1926 to 1941, and played an important part in developing the SAIMR into a prominent research institution. Pirie's hobbies were his superb orchids and an internationally known collection of stamps.

Scottish medicine and science in the Scotia sea

Pirie's first association with South Africa occurred when the *Scotia*, a barque-rigged auxiliary-screw steamer of about 400 tons, put into Cape Town in May 1904, after 16 months in the Falklands and Antarctic waters. Pirie was geologist, bacteriologist¹ and medical officer (a strange combination) on the Scottish National Antarctic Expedition.²

The expedition reached Stanley, East Falkland, early in January 1903. There they made scientific observations (meteorology, magnetism, bacteriology, botany and zoology) for 3 weeks. The Falkland vegetation was similar to but more sparse than that of northern Scotland, but the extensive beds of kelp (sea-weed) surrounding the islands were a distinctive feature. The Falklands had a population of 2 000, of whom 900 lived in Stanley² (the present population is given as 1 800). Mutton of the finest quality was 2d to 4d per lb.

The *Scotia*, on going south, encountered very heavy pack-ice, and at 70° S, the question of where to winter arose. They set up winter quarters at the end of March on the unclaimed Laurie Island, South Orkneys, at 61° S and some 1 200 km south of Stanley. Some revealing notes from the party's records were: 'iced-in, April to November'; 'even in summer most days sunless'; '93% cloud and 49 hours sunshine per month in summer'; 'preferred penguin breasts for meat and soup to seal meat'.

The ship's engineer, Allan Ramsay, died on 6 August 1903. Pirie wrote: 'He had been gradually going downhill ever since March, and the last two months had been spent entirely lying in a deck-chair in front of the cabin stove . . . Hurrying back that morning, I found him suffering great agony, which I was able to relieve, but could do no more. . . . It was not until considerably later that I found out that he was suffering from heart disease. But the cold was too trying, and rest and all remedies proved unavailing.' Apparently the expedition discovered only on their return to Scotland that Ramsay, who had been in his early twenties, had had a heart condition. (At present 12 nations, including South Africa, mount expeditions that winter in isolation in Antarctica and the sub-Antarctic islands; it is axiomatic that an individual with a chronic disorder such as appendicitis, valvular heart disease, or hypertension should not be selected.)

Otherwise little illness or trauma was recorded, and Pirie's only comment was that some members suffered on occasion from snow-blindness; 'found them all with their heads buried like the proverbial ostrich — crooked with snow-blindness: their eyes felt as if hot sand were in them and the tears simply streamed over. . . darkness and cocaine indicated'.

That spring the *Scotia* left for the Falklands and Buenos Aires for repairs and coal, while the naturalists explored the Falkland and South Orkney Islands. The *Scotia* brought back Argentinian meteorologists, who took over the expedition's winter hut for a 5 000 peso (US\$ 2 122) donation to set up a weather and later a wireless station. (While Laurie Island is now regarded as a British dependency of the Falklands, the Orcadas (Argentine) station there has been manned uninterruptedly since February 1904, which makes it the longest permanent habitation in Antarctica.³ Wind speeds of 320 km/h have been recorded there. The present base of the British Antarctic Survey in the South Orkneys is on the nearby Signy Island.)

Return via Antarctica and the Cape

The expedition conducted a second exploration of the Weddell Sea, reaching the Antarctic continent early in March 1904 and naming the area Coats Land after their major sponsors. (The South African National Antarctic Expedition (SANAE) base, in existence since 1960, is to the immediate east.)

Heavy ice was setting in, and the ship broke out into the 'Furious Fifties' and 'Roaring Forties' to reach Gough Island on 20 April. The only landing they could make was at the Glen (some 6 km south on the cliff-top is the present South African weather station). At the Glen they found huts from sealing expeditions and a painted sign 'Fred Andrews 1892'. Having insufficient coal, the *Scotia* went under full sail to Cape Town, arriving on 5 May 1904. Here Andrews, who had been a sealer on the schooner *Wild Rose* and had lived on Gough Island for a year, was located.

'But we had to pay the penalty that all polar travellers have to pay on their return to civilization. In a few days almost everyone on board caught a very bad cold. . . . Polar regions, by very virtue of their entire immunity from harmful germs, do not harden a man in his power of resisting germinal diseases such as colds are. His body has lost the art of throwing aside injurious bacteria through want of practice; and so, as soon as he returns to civiliza-

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tion and the haunts of germs, he tends to fall an easy victim', states the report concerning the expedition's arrival at Cape Town.

The virtual absence of viruses, micro-organisms and allergens in those who overwinter in isolation in Antarctica, with diminution of immune factors, and the sharp recrudescence of colds, respiratory virus infections and rhinitis on contact with the relieving party or on return home have been the general experience of all recent investigators.⁴⁻⁶ In particular, in the members of the annual South African National Antarctic Expedition at the SANAE base during 1971-1974, the total white cell count and serum immunoglobulin G level decreased significantly and that of serum IgM less so.⁷ In the 1975 SANAE team, in which 15 out of 23 members exhibited hypersensitivity to common allergens, the allergic subjects were completely symptom-free in Antarctica.⁸

Pirie's activities in Johannesburg

Apart from setting up the SAIMR bacteriological laboratories, Pirie made significant contributions to the investigation of tuberculosis and plague in South Africa.⁹⁻¹² He was prominent in affairs of the Medical Association of South Africa and President for a record number of 7 years from 1939. Pirie made an eloquent plea for stamp collecting as a doctor's hobby¹³ and recalled his

own special interests, which included stamps and covers from various Antarctic expeditions, as well as those from the temporarily or permanently inhabited bases in Antarctica and the sub-Antarctic islands, including the Falkland group.

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