

Augusto Gansser, 'Baba Himalaya' [28 October 1910-9 January 2012]

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Professor Augusto Gansser was a pioneering, adventure loving Swiss geologist who gave vast insights into the world's great mountain chains and oil exploration. He made exceptional, strenuous journeys to remote areas when there were still blank spaces on geological maps. He was the first to geologically study Tibet's sacred Mount Kailash, disguised as a Buddhist pilgrim. Regarded as a man of few spoken words, he was a prolific author who recorded much in field sketches and photographs. His work and studies took him worldwide.

He was born in Milan, to a Swiss businessman trading in tanning products and a German mother. When he was aged four, his family returned to Switzerland where he went to school in Lugano. During a family holiday to Andermatt, when he was seven, he developed a lifelong passion for geology upon finding a large rock crystal in the foundations of the Furka-Oberalp railway, then under construction. He kept it in a display cabinet for the rest of his life. He took to mountaineering at an early age and in 1929 studied geology at Zurich University from where, before he graduated, his adventures began in 1934. Via an invitation through the Swiss Alpine Club, he joined a four-month long Danish expedition to east Greenland under the leadership of Lauge Koch who was looking for tenacious scientists. Voyaging on a three-masted sailing ship, the 'Gustave Holmes' with a crew of 60 and a seaplane, he was to help explore Shoresbysund Fjord. On this trip, Gansser learnt to write field notes in mirror script to prevent his insights being deciphered by others. The ship became trapped in pack ice for a week and all began to fear an over-wintering, 'when we would have ended up chewing our leather belts.' Breaking free, the ship was battered by fearsome autumn storms, which, for the landlubber Gansser, caused him to 'give up all attempts to lie down, eat or sleep.' On September 14th, a great cracking sound was followed by 18-inch deep water pouring into his cabin. The ship finally put into Reykjavik from where Gansser returned home to complete his Doctorate in 1936.

Shortly afterwards, under the geologist Professor Arnold Heim, together with the noted mountaineer Werner Weckert, he made up the first three man 'Swiss Himalayan Expedition' of 1936, promoted by the Swiss Scientific Society. They aimed to study the structure of the Himalaya along the Kali valley in geologically unexplored Kumaon through Nepal to Tibet. Repeated efforts to gain access to the latter lands proved futile as both countries were closed to foreigners. Three days after the start, Weckert suffered appendicitis and was taken by stretcher to Ranikhet where his life was saved. The two remaining Swiss, 'ruefully aware, as we made for the wilds, that we were both "happy" possessors of an unremoved appendix', plus their thirty porters, three Sherpas and a 'boy' cook (the only one to accompany them throughout), pressed forward from Almora to roam widely amongst the Himalayan giants in the worst summer in living memory, under excesses of cold rain, snow and storms. Having forgotten insect repellent, they were fiercely attacked by myriads of bugs. Despite the prohibitions, several visits were made to the forbidden lands, producing results which were well worth the embarrassing consequences.

They first crossed forbidden borders onto the Api glacier where the far northwest of Nepal meets Tibet. Here, at 19,000 feet they claimed 'firsts' for skiing in both countries. Travelling further northwest, on 28th June 1936, out of more than geological curiosity, Gansser decided to visit Mount Kailash, upon which only a handful of Europeans had ever set eyes. He crossed the border via the 18,380 foot Mangshang La [pass] into Tibet, disguised as a Buddhist pilgrim, 'from regions far away'. Whilst Heim continued his research, Gansser travelled with two local traders on pilgrimage to the peak, two Tibetans and a Sherpa porter, all of whom protected his real identity. The party made the clockwise circumambulation of this most holy of holy mountains, Gansser 'with no less reverence as a pilgrim of science in search of the sacred in this wonderful mountain where the gods dwell.' He added, 'I was able to hide a lot of things under my red sheepskin Caftan cloak, such as a geologist's hammer, a camera, sketch books and a compass.' His particularly blue eyes, he feared, might give him away, but actually offered him protection. They were noticed by the lamas in the monasteries who recognised he was no real monk, but because of this peculiarity, they opened their doors to him.

He pressed on, at times fighting off fierce mastiffs, drinking butter

tea brewed on yak dung fires in smoke filled nomads' tents and, sleeping in a sack under open skies, he was drenched by rain storms far worse than anything he had ever encountered in the Alps. His clothes froze and he proceeded in squelching boots. At the first sighting of Kailash, all in the group threw handfuls of rice into the air as a blessing. On being approached by bandits he forgot his incognito and attempting to take their photograph, was rushed at with a sword and had to flee. He managed, however, to sneak a few pictures of the holy mountain by hiding behind a rock. Taking geological samples was also risky because all stones in the area were deemed sacred and their collection sacrilege; he circumvented this by collecting rocks which were hidden by his sweeping cloak. At the main pilgrimage Gumpa he paid his respects to the head Lama who gave him, 'a bag of tiny pills which would preserve me from every possible mischance. In the dim light he had no suspicion that he was receiving a European in audience.' In a cave beneath the chapel, Gansser, along with other pilgrims, rotated a great prayer drum and prostrated himself in front of the holiest of all images, that of Kailash. After crossing the Dolma-La, at 18,000 feet the highest pass on the pilgrimage circuit, he returned south to rejoin Heim who was camped inside the Tibetan border. Gansser had now changed from pilgrim to shepherd. His collection of tell-tale rock samples collected from rich fossil beds was smuggled out disguised as bags of salt, a local trade item, in small sacks on the backs of 12 sheep and 17 goats - traditional local pack animals, which his party had purchased from local traders and which required night time protection from prowling wolves.

Kailash, Gansser later enthused, was unique, having been elevated to above 20,000 feet from sea level with its strata remaining horizontally undisturbed, despite being encompassed by steeply inclined bedrock. On the southern flanks, he found rocks of a type also found on the Indian side of the Himalayas, and sensationally, 'Ophiolite' - formed on the bed of the ancient Tethys Sea. This discovery of the 'Indus-Yarlang-Tsangpo Suture Zone' supported Heim's original idea of ancient colliding continents uplifting the Himalaya. The concept was further developed in the 1960s when Gansser put it into the context of the now accepted theory of Plate Tectonics and he was instrumental in interpreting the origin of the Central Asian mountain belts.

Moving north west, Gansser again made an excursion into Tibet by

uncharted routes to the gorge containing the sacred River Sutlej. He suffered from fever, which he termed 'Tibetan malaria' and the party endured thirst and survived a flash flood. They overnighted in the caves of an unknown, abandoned ancient 'City of the Rocks'. After many further adventures, back in India, the District Deputy Commissioner, Mr Finley ordered their arrest in their camp at 17,000 feet. Ordered to return to Almora, they chanced upon a few British officials on tour dressed in khaki shorts and topees who totally ignored them, 'because we had not been introduced, were unshaven and unkempt.' Their border misdemeanours were referred to Delhi. During this enforced delay the Swiss were astonished to meet an Indian botanical physiologist whose laboratory was filled with the very latest equipment, measuring electrical currents in isolated living cells.

After nine days with no reply from the authorities, the pair set off to Garhwal whose Deputy Commissioner permitted them to travel the pilgrim's way to holy Badrinath and the sacred lake at the source of the river Ganges at the snout of the Satopanth Glacier. Gansser swam in the lake which swarmed with tiny fire-red plankton. En route to Josimath they met the mountaineer Eric Shipton and his two Sherpas on his return from Mount Dunagiri. After eight months, having tramped more than 900 miles around the central Himalaya, the duo finally returned home, one by ship, the other by 'plane.

Home in Lugano in 1937, Gansser married Linda Biaggi, a champion swimmer. They drove to Morocco on honeymoon in a Fiat Balilla car, camping in a small tent. Henceforth, his wife, nicknamed 'Toti' was to accompany him on his worldwide travels whenever she could; they used their local Swiss dialect as a secret language. Later that year, the Shell Oil Company recruited Gansser to work as an oil-pro prospector in Colombia for three years, where three of their six children were born. Here he thrice explored the geologically unknown Macarena Mountains, each expedition lasting three months. Due to the outbreak of the Second World War, the family was unable to return to Switzerland until 1946, when they took passage on the recently decommissioned British aircraft carrier 'The McKay'. Gansser smuggled two large emeralds on board which he had found jutting out of a Colombian rock. At the port, he learnt it was forbidden to export uncut precious stones, so he hid them in the nappy of his then infant son, who claims to this day they are the reason for his back pain.

Gansser did not remain at home for long. In 1947, he was deployed by Shell to work in Trinidad for three years and in 1951 he was appointed Chief Geologist of the National Iranian Oil Company for whom he worked for eight years. Gansser selected an area north of Qom to probe for oil. The fifth drilling, at 9,850 feet, resulted in the then largest ever 'wildcat' oil gusher on 26th August 1956, which destroyed the drilling rig. Some 80,000 tons of oil per day spumed out a hundred feet into the air, causing massive environmental damage and forming enormous black lakes. A state of emergency was declared and experts from Texas were brought in. Three weeks later, it was deliberately set ablaze and the flow finally ceased when the well closed itself. Once, Gansser and 'Toti' followed a caravan of Kashgai nomads on their annual transhumance migration with their camels and thousands of sheep from the Zagros Mountains to Shiraz. Gansser obtained a set of camel bells which he eventually took home to Switzerland with which he would ring welcome to each new morning until his dying day.

In 1958, Gansser accepted simultaneous 'Ordinarus' full professorships at the University of Zurich and the Federal Institute of Technology (the ETH - Eidgenoessichen Technischen Hochschule), on the proviso that he would still be permitted to travel. He found that in addition to his geologist's hammer, pencil and paper were the most important tools, 'by drawing, one gets much closer to the subject.' He was regarded as a charismatic speaker - his lectures were sought after and well attended. When giving them, he had the remarkable ability to draw exquisitely coloured geological profiles in chalk with one hand, whilst simultaneously writing with the other on a blackboard.

Between 1963 and 1977, Gansser made five visits to Bhutan, where Swiss funded technical development was established due to personal friendships established by King Jigme Dorji Wangchuk. Through the support of the King and the Swiss Foundation for Alpine Research, Gansser was able to travel to remote northern Bhutan along the Tibetan border. In the high, northern, isolated villages of Laya and Lunana he heard tales of evil spirits causing glacial lake dams to catastrophically collapse; as a consequence he surveyed them. In 1967, he reported specific dangers so that Bhutan's population could be protected from future flood disasters.

Gansser retired as Professor Emeritus in 1977 after which, in 1980 and 1985 he was invited by Deng Xiaoping, the reforming Chinese politician,

to make tours of Tibet. In 1985, he returned to Lugano where his beloved wife 'Toti' of 63 years died of Alzheimer's disease in 2000. Often asked what was his most difficult situation in all his adventures, he declared it was the loss of his wife. In recent times, he recalled that the reason for his longevity might be, 'that near Mount Kailash the Lama in charge of a monastery, gave me some pills for a long life. I am grateful to him to this day because it seems that they worked really well.' However, as he became infirm, he was to express that he felt as though he was a prisoner in his own body.

Augusto Gansser was a member of The National Academy of Sciences [USA]; the Academia Nazionale dei Lincei [Rome]; the Nepal Geological Society and The Swiss Foundation for Alpine Research. He received many awards, of which the principal ones were: The Wollaston Medal of the Royal Geographical Society; The Prix Gaudry of the French Geological Society; The Gustav Steinmann Medal of the Geological Society of West Germany and the King Albert [of Belgium] Medal of the King Albert I Memorial Foundation for Mountain Research. In 1983, he was given the honorary title 'Baba Himalaya – Father of the Himalayas' by Peshawar University, Pakistan.

Gansser's main publications include *The Throne of the Gods* (1938) and *Central Himalayan Geological Observations of the Swiss Expedition 1936* (1939), both co-written with Prof. Albert Heim. His monographs, *Geology of the Himalaya* (1964) and *Geology of the Bhutan Himalaya* (1983) are considered classics of descriptive geology. In 1999 he wrote a book on ancient rock carvings 'Schalensteine / Cupstones'. His technical papers are listed in a bibliography running to some twenty pages. An illustrated biography in German, *Augusto Gansser*, was published in 2008 in Switzerland. An English translation was published in 2012.

Near his life's end he declared he was, 'not superstitious, but somewhere exists something greater. I have no fear of death; when it comes, it comes. Instead of flowers I would like a geologist's hammer.' He died surrounded by four of his six children. He is survived by two sons and four daughters.