

Charting the high mountains

It is virtually impossible to find detailed trekking maps of the Indian Himalayas. This is now set to change



Shepherd and grazer paths in the Himalayas. Photo: Padmaparna Ghosh

In November, just as winter was setting in, two trekkers headed towards the north-east base camp of the Kanchenjunga, on what is also known as the Green Lake Trek. One of them decided to hit the trail earlier than the rest of the team and took off by himself. His friend, Sujoy Das, followed a while later.

But before long, Das, a photographer and the founder of South Col Expeditions, a Kolkata-based trekking company, realized something was wrong.

He couldn't find his friend. With no means of communication, Das sent the guide to locate him. "There was a point where the trail split, with one winding down to the river and one ascending. He just thought he had to climb. He was found sitting somewhere 1,000ft up," says Das.

In short, they were lost. High mountain adventure allows, at the most, sliver-thin margins of error. Three parameters can ensure that you stay on the right side of this margin: caution, humility and preparation. A large part of the latter consists of appropriate equipment and good

maps.

Hundreds of adventure travel ads exhort travellers to "Get lost in the Himalayas". It is surprisingly easy to do so, even today.

The Indian Himalayas sweep across from Jammu and Kashmir to Arunachal Pradesh, covering 500,000 sq. km, or around 16% of the country's area: a treasure for mountain lovers, and an area of darkness for map enthusiasts. High-resolution, detailed, accurate and updated trekking maps either don't exist or are virtually impossible to find.

A few adventure lovers are now trying to chart these areas and etch out the GPS profiles (latitude, longitude, altitude) of trek routes over mountain passes and down deep gorges.

Depi Chaudhry, 46, an adventurer and guidebook author, has spent the last three years painstakingly stitching together over 10,000 detailed images of the Indian Himalayas to create a 17x17ft contour map—contour lines are helpful in reading gradients in an area: stream valleys, cliffs and peaks. The result is a map with a resolution of 1:130,000—far more detailed than the Leomann maps, the most commonly used by hikers, with a resolution of 1:200,000.

Chaudhry has also mapped about 40 trek routes with accurate GPS data, with an error margin of 2-3m. "I found these (contour) maps online on OpenCycleMap, a global map for cyclists," Chaudhry, a self-confessed map freak, says. "I contacted the founder, Andy Allan, and he allowed me to use his images for free."

What followed was a "sewing" project of epic proportions. Imagine a jigsaw puzzle where you have to identify one "square" of terrain, perhaps in Jammu and Kashmir or Uttarakhand. Once you identify that, you "build" the map around it, square by square. One summer, with little to do, Chaudhry spent two months "sewing" this together.

"This map will be overlaid with a ton of information, such as camping spots, spring-water sources, bridges, streams, hamlets, huts, river crossings, porter phone numbers, etc. Each trek will also have a GPS elevation profile," he says. GPS elevation profiles mean that a hiker knows the cumulative ascent and descent on a day's hike, instead of just a net elevation gain—like a blinking dot on an ECG graph. The map will soon be available for free downloading in a PDF format on the to-be-launched website, www.himalayamaps.com.

Chaudhry says that in the next three-four years, he will cover several more routes, to put together the best possible information on trekking in the Indian Himalayas.

"But the way forward is digital," he says. The information technology firm Tata Consultancy Services (TCS) is building an app based on Chaudhry's maps, which means that the routes will be available on any smartphone.

The problems with the current maps are manifold, beginning with availability. Das, who uses the popular Leomann maps, says: "They are okay but haven't been updated for decades. Look at Ladakh, which has undergone a sea change with highway construction. Marked treks that

existed 20 years back don't now. A marked trail on the map might be a highway today." In an earlier trek to Sikkim, Das carried maps dating back to 1899 and the 1930s so that he could mark out the changes in terrain.

In contrast, neighbouring Nepal, prime Himalayan country, has almost all its landscape marked on large, detailed maps. It even has local mapping companies such as the Himalayan Map House, which publishes the Nepa Maps. There are also Schneider Maps, Gecko Maps and Leomann Maps, which are all excellent maps produced by outside agencies.

"Walk into any bookshop in Kathmandu and chances are they will have, like, 30 maps of the Great Himalaya Trail—beautiful, laminated field maps," Das says. "But we haven't reached a level of commercialization like Nepal (when it comes to adventure tourism). Who is going to spend so much money doing this?" he adds.

Trekkers inevitably transform into map junkies—partly out of necessity, partly out of nostalgia. Chaudhry recalls the times when fellow hikers would tell him about a map at a certain shop, spurring him to rush there to buy it, or the times when he scanned maps his friends found but were loath to part with.

One problem, says Das, is that maps of Himachal Pradesh or Uttarakhand are available only in the respective states and not, for instance, in Kolkata, where he is based.

Updates are problematic as well: After all, streams change course, bridges get washed away, hamlets appear, villages disappear. Micah Hanson, 39, a post-doctoral student at the Northwestern University in Chicago, has walked the Himalayas for years. Hanson, who has spent several summers hiking in Ladakh, found that often villages had moved from the locations on maps, or that river crossings had shifted, mandating long route changes.

Chaudhry has a plan to address this: crowdsourcing. Since it will prove difficult and expensive to update every route every four-five years, he plans to take permission to access the GPS logs of all TCS app users who venture on treks. This will provide regular information not just about new trek routes in the region, but also about new road-heads, highways, villages and campsites.

If at all, trekking agencies tend to rely mostly on Google images. After the advent of Google Earth, for instance, the Manali-based agency Potala Adventurers offers prints of Google maps with the routes marked on them, so their guides can now carry rough maps. Mountain Shepherds (MS), a trekking tourism outfit in Uttarakhand, sends its clients videos of the trek. Generally, however, agencies don't feel the need to invest in maps since they run very popular trek routes that guides and porters know well.

Sunil Kainthola, who runs MS, says, "We run these routes so often that we know every stone and bend." He adds that since the usual trekker only opts for popular treks, the cost of exploring new areas or finding new routes is too high. "Authentic exploration is expensive." Instead, MS now provides multimedia itineraries, including videos of the actual trek and what Kainthola calls "Google fly-bys", which give a "better topo(graphic) feel".

In an age in which our existence is assured by a blinking blue dot on a Google street map, much like Carl Sagan's illustration of Earth as a *Pale Blue Dot* in a terrifying, dark blankness, chancing upon an uncharted area in this hyper-mapped era can only be exhilarating.

"There is so much uncharted territory in India," says Hanson, a proponent of independent trekking who runs www.indietrekking.com. "There is a sense of satisfaction of striking out on your own, to walk out into the mountains, in the silence and remoteness, and figure things out yourself." Good maps would give a fillip to independent trekking, he says, adding that this would also boost village economies, since trekkers would use home-stays and buy provisions.

In the high Himalayas, meadows and passes are embroidered with paths marked by the feet of grazers, shepherds and villagers living on the edge of existence, a playground of infinite routes. "Maps might not know of these trails yet, but there are few footholds and cliff-faces unknown to our shepherds," Kainthola says. "You just need to find them."