

There is a general statement as to the nature of the mountain ranges of the United States, and reference to some outstanding peaks. It is stated that while a number of peaks have been climbed by difficult routes, there is always an easy side.

Mention is made of the chief western clubs, namely the Sierra Club, Mazamas, Mountaineers, and Colorado Mountain Club. With but very few exceptions, the climbing available in the United States is not strictly alpine in nature.

Alaskan mountaineering is said more to resemble Arctic exploration than ordinary mountaineering. The chief ascents to date in Alaska are Mts. McKinley, Logan, St. Elias, Blackburn, Natashat and Wrangel. Each one of these climbs required weeks or longer for their accomplishment. "On no other mountains in the world must the climber live so long on ice and snow as in Alaska . . . "

Altogether the subject is treated in a very readable manner and gives to the layman, as is intended, a fair, if necessarily brief, picture of the sport and pursuit of mountaineering.

H. S. H., Jr.

NEW EXPEDITIONS

FIRST ASCENT OF MT. SANGAI, ECUADOR

Mt. Sangai in Ecuador is an active volcano, which for many decades has borne the reputation of being one of the most violent in the world. Detached from the main chain of the Andes, it juts out into the Amazon basin, a lonely sentinel, 17,464 feet above sea level. Although only about one hundred and fifty miles south of the equator, the last half mile of altitude is covered with a crown of ice and snow, which precipitates millions of tons of water and ice down the steep slopes at times of the irregular major eruptions. It is not the altitude which has prevented the attempts on its summit during the past two centuries from proving successful. The cause lies in three things: first, the labyrinth of mighty ash canyons which circle it on the three approachable sides with 500 square miles of difficult terrain; second, meteorological conditions which maintain almost constantly a pall of mist and cloud over the whole area and render even the locating of the volcano difficult; and third, the superstitious fears of the native Indians who never explore the labyrinth of canyons and on whom one must depend for cargo bearers.

All early attempts to reach the summit failed far short of the objective. Not until 1925 did anyone reach a high point on the ice cone, when Commander George Dyott, an Englishman, after months of effort finally explored a route through the canyons and came to grips with the ice-field. On his first attempt he was stopped by snow blindness and on his second he got entangled in a crevassed area on the southeastern shoulder, while his companion was incapacitated by "siroche." His following of Indians refused to proceed beyond the snow-line.

On July 15th, 1929, a zoological expedition, headed by Robert T. Moore of the Department of Vertebrate Zoology of the California Institute of Technology, and accompanied by his son, Terris Moore of Williams, Lewis Thorne of Yale and Waddell Austin of the University of California, left the last inhabited Indian village of Alao and plunged into the water-soaked wilderness to the north of Sangai. The party was beset by many difficulties—daily rains, loss of equipment, desertion of the Indians at critical moments and reduction of food supplies to the danger point on several occasions, when fortunate killings of deer or tapir made possible a continuance of the attempt. After eighteen days of constant rains the party worked its way through the maze of canyons and climbed above the shroud of mist to the snow-line and to blinding sunlight.

After two unsuccessful attempts from a camp at about 15,000 feet, on the third, the party set out at about 6 a. m. on August 4th and succeeded in cutting steps up the steep frozen slope of the cone to the north of the crevassed area, which had stopped Commander Dyott, and at 1.50 in the afternoon, the leader gazed for the first time into the crater. Dense clouds of light-colored gas poured from the orifice. The leader and his son proceeded together to the highest point on the precipitous rim. In spite of mountain sickness which affected one member, the entire party of Americans reached the top, but such Indians as had not deserted earlier, feared to cross the snow-line. The 15,000 ft. camp was on the northwest side of the peak and the route took them on a traverse of the steep slopes towards the south until the area of crevasses and hummocks was reached, when they zig-zagged back towards the western side again. From the top the party made a rapid descent past the 15,000 ft. camp to a larger camp 1,000 feet below the snow-line. Moving pictures, under clear conditions, were secured of the summit crater and its surroundings.

R. T. M.

THE S. E. FACE OF THE DENT D'HERENS (First Ascent)

The S. E. face of the Dent l'Herens, 4,180 m. (4180 m.= 13,715 ft.) towers over 3,000 feet above the Cherillon Glacier. It is limited toward E. by a jagged ridge, which divides the Cherillon Glacier from the Mont Tabet Glacier, and partly supports the latter. This ridge is designated as S., and was followed by Harold W. Topham with Aloys Supersaxo, Clemens Perren and Aloys Pollinger, July 19 and August 31, 1889. Another party touched the S. E. face of the Dent d'Herens; Guido Rey, with Jean Baptiste Perruguet, Aimé and Ange Maguignaz, descending from the Pointe Blanche, bivouacked at a height of about 10,400 feet or about 600 feet above the Cherillon Glacier. From the bivouac place, on August 21, 1898, they descended to the Cherillon Glacier. The mean inclination of the S. E. wall in the portion followed by our party is 56°.

The incognito of the ascent were the 1,500 odd feet of the middle portion of the wall. The inclination of this part is formidable.

A preliminary exploration of approaches was done on August 2 and 3, 1929. The exploration was furthered on August 16, but an attempt on August 17 was frustrated by bad weather. On the same day a final survey of the S. E. wall was done, and the approach to the S. ridge was explored.

On August 31, Luigi Carrel and Max M. Strumia left the newly built hut at 'Lo Rionde' 2,804 m. above Breuil, at 2.45 a. m. By prairies and descending somewhat we reached at 3.20 a. m. the lower extremity of a rocky rib dividing the Cherillon Glacier from the 'Ghiacciaio del Leone' (without name on S. map). By turning this, the true left lateral moraine of the Cherillon Glacier was reached at a point about 2,700 m. and it was followed for a while until it appears blocked by a huge mass of rock. From this point the Cherillon Glacier was easily reached 3.50 a. m. The glacier was then crossed in a large circle, so as to avoid the seracs below. The crossing was done without losing height in about 10 mins. At 4.45 a. m. we were at the base of a steep ice cone, the apex of which continued into a couloir to the left of a ridge forming our approach. The rocks which we were to follow belong to a spur that detaches itself from the great S. E. face of the Dent d'Herens between the couloir descending from the true right of the Pointe Blanche and the S. ridge of the Dent d'Herens itself. The lowest portion of this spur is marked with quota

2,984 m. on the map of 'Monte Cervino' 1:20,000 of the I. G. M., 1922. The ice cone was ascended in less than 10 mins., after which an easy approach was made to the rocks on the right. These were in the beginning, easy, but covered with much loose debris. The first difficulty encountered was a chimney 4.55 a. m. bounded by smooth *plaques*, and ending with an overhang. It was turned by a ledge on the left, and the couloir reached. This was followed for a short while (loose rocks) then, on the right side of the couloirs, came various steep *plaques*, and another chimney. The couloir was again reached and followed to near its upper end, where it turns somewhat to the right and ends against overhanging rocks (6.00 a. m.). A passage followed over very steep and smooth *plaques*, to the right of the couloir, about 100 ft. in height and extremely difficult. This portion had been descended by the Rey party *en rappel*. With the aid of an iron piton, and with Carrel swinging from the rope under an overhang, in 40 mins. of exhausting work we were above the difficulty, very near the place of bivouac of the Rey party. We then turned to our left, to face the main wall. This we reached by following a thin, horizontal ridge, where the spur so far followed, ended.

We followed straight up by good rocks until a little shelter was reached at 7.20 a. m. We left it at 7.45 a. m.; a little above, a patch of snow was found. Immediately above this a difficult chimney is encountered, above which the ridge vanishes in the great wall above, which at this point sweeps upward at a terrific angle. Turning to the right, it is possible to reach another ill-defined rib formed of extremely steep rocks, with many holds, but not as secure as before. This rib is followed in the direction of a large, red gendarme of the S. ridge which is immediately above, until the rib ends against a perpendicular wall about 60 ft. in height ending in the said ridge. A first attempt to reach this on the left ended against a huge unstable overhanging rock; a ledge was then followed for a few feet to the right, after which a direct difficult climb brought us to the S. ridge, 9.40 a. m.

The point where the S. ridge was reached is on a level with the Col des Grandes Murailles (ca. 3,850 m.) and near the summit of a very large gendarme the rock changes colour very abruptly, becoming of a dark reddish brown. This band is very readily seen from the E. We left at 10.10 a. m. The top of the gendarme of white rock was turned on the right, E., and the ridge between the white and the red gendarmes was reached by a difficult passage along

a vertical fissure. The S. ridge was then followed up to where it joins the S. W. ridge coming from the Col des Grandes Murailles (3,975 m.), 11.30 a. m. Here the difficulties ended and at 12.30 we were standing on the summit, having followed in the last portion the E. arête.

The descent was made by the W. arête, reaching Praraye at 22.15, including a halt of 1½ hrs. on the summit and 1½ hours spent lying flat on the ice a little below the summit, waiting for a severe electrical storm to pass. Halts of 1 hr. and 10 mins. were also made later.

The ascent is a very interesting one but it is rather fatiguing; in the portion between quota 2,984 m. and 3,975 m. or about 1,000 m. the difficulties are continuous. There are three very difficult passages, the first one of which, over the *plaques* descended *en rappel* by the Rey party, could be greatly facilitated by placing a cable about 100 ft. in length. The ascent should not be undertaken unless weather conditions are excellent and there is little snow on the face. Even in this condition the lower portion of the wall is exposed to rock falls after sunrise, as experienced by the Rey party. We did not, however, during the whole course of the ascent suffer from any rock fall, although the nearby face and couloirs of the Pointe Blanche and Grandes Murailles were raked by falling stones all day.

M. M. S.

VARIOUS NOTES

Sierra Nevada de Santa Marta. This fine range situated in northern Colombia, was visited in March, 1930, by Mr. and Mrs. Thomas D. Cabot. Although easily accessible from the eastern seaboard, and with peaks 19,000 feet in height, the range is almost unknown to alpinists. Being completely surrounded by low land, it is not a part of the Andes, but is a separate group close to the ocean.

The peaks are covered with magnificent glaciers. They are not volcanic cones but present cliffs of rock and ice and fine arêtes to tempt the climber. The highest *massif* with a triple summit is in the center of the range and is called by various authorities Horqueta, Picacho, and Colon. There are no other peaks approaching it in height. Earlier parties have approached the peak from the south side, which they reached from Fundacion, or Rio Hacha. Mr. and Mrs. Cabot went