

main summit. On May 26, the leader, New Zealander Russell Brice, Australian Mark Lemaire, Norwegian Eirik Tryti and Briton Mark Vallance got to the central summit, followed the next day by Norwegian Olav Ulvund.

XAVIER EGUSKITZA, *Pyrenaica, Bilbao, Spain*

Shisha Pangma Medical Expedition. The Academic Alpine Club of Kyoto and the Kyoto University Medical School sent a medical expedition to Shisha Pangma. We had 32 Japanese and two Chinese members. There were 13 medical doctors, two clinical laboratory technicians, 13 climbers and six others. Three were women climbers, including one Chinese. The chief emphasis was on medical research. Clinical laboratory equipment was carried to Base Camp and higher. A unique feature was research on monkeys. A pair of young Japanese monkeys were trained before the expedition for hypoxia in a decompression chamber; they were carried up to Advance Base at 5640 meters, where their behaviour and physiological change at altitude were observed. Human observations were made on two elder doctors, aged 60 and 59, who climbed to the central summit. The overall leader was Dr. Takayoshi Tobe and deputy leaders Drs. Atsuo Saito and me. The research leader was Dr. Kozu Matsubayashi and the climbing leader was Tetsuro Matsuzawa. We climbed the normal northeast-ridge route. Base Camp, Advance Base, Camps I, II, III and IV were established at 5020, 5640, 5850, 6340 6920 and 7430 meters on March 30, April 6, 17, 21, 30 and May 4. Camp III was called Laboratory Camp because of the medical research carried on there. A Camp V was placed at 7700 meters on May 16 for research only. Holter-EKGs and Pulse-oxymetrics during sleep were tested at this camp. On May 17, Matsuzawa, Dr. Akira Demizu, Ryo Nagata, Kozo Tominaga, Shigeki Nakayama, Toshihiro Tsukihara, Masanari Takai, Hiroshi Fujita, Miss Azumi Shirasawa, Chinese Mrs. Tong Lu, Dawa Norbu Sherpa and Arjun Tamang reached the central summit. They were followed two days later by Dr. Kazuo Hirata, Tibetans Xiao Qimi and Purbu and Sherpas Ang Phuba and Mingma Norbu. On May 21, Drs. Matsubayashi, Saito, Shiro Seto and I, along with Masaharu Sakakibara, climbed to the central summit with three Sherpas. Most set out from Camp IV. *Medical Research:* Findings in high-altitude physiology included 1. *High-Altitude Retinal Hemorrhage:* This was observed in both eyes of 100% of those who reached 6000 meters for the first time. The incidence decreased significantly among experienced Himalayan climbers. It was observed among only half the climbers above 8000 meters and was mostly in only one eye. 2. *Gastric Hemorrhage:* Gastroscopic examination performed at Base Camp on the last day of the expedition on 25 members revealed a high incidence of gastric bleeding, namely four cases (16%). This was the first attempt of gastroscopy performed at such an altitude and in the field. 3. *Sleep Study:* Oxygen saturation monitoring during sleep confirmed the effectiveness of oxygen inhalation at high altitudes. Supplementary oxygen during sleep is advisable for safer high-altitude mountaineering. 4. *Monkey Study:* The monkeys were tolerant of hypoxia but weak against the cold. They often caught cold.

Polycythemia was observed even two months after coming home. EEGs during sleep were also recorded. 5. *Hormones*: The edema-related hormones (e.g. ACTH, ADH, ANG, PRA, Aldosterone, etc.) did not reveal any change at altitude compared with sea level. These hormones may not participate in high-altitude edema. 6. *Blood*: Sequential increase of erythropoietin, reticulocytes and erythrocytes was observed at high altitude. The increased activity of platelets at altitude was also confirmed.

MICHIRO NAKASHIMA, M.D., *Osakafu Saiseikai Izui Hospital,
Osaka, Japan*

Shisha Pangma Central (West) Summit Illegally Climbed by East Germans. Traveling on next-to-no money (we each spent the equivalent of US \$700 on the whole trip from East Germany and back), Winfried Kraus, Dr. Karsten König, Fräulein Sabine Körbs and I eluded Chinese authorities and reached our Shisha Pangma Base Camp on May 7. We had to go around the official Base Camp where there were the Chinese liaison officers. Despite very inadequate, homemade equipment, we three men climbed on the normal route to 7500 meters, where we felt too weak to continue on this first attempt. We returned to Camp I at 5800 meters. Several days later, on May 25, König and I again were back in Camp III at 7350 meters and the following day ascended to the slightly lower central summit, along with members of an international expedition. The conditions and the hour were such that we declined to climb to the main summit. [*Editor's Note*: While we may admire their ingenuity in getting to the mountain and climbing to the central summit, we deplore all illegal ascents which can not fail to cause difficulties for those climbers who do go through normal channels.]

REINHARDT TAUCHNITZ, *Leipzig, East Germany*

Shisha Pangma Pre-Monsoon Attempts. An Italian team led by Marco Berti attempted to climb Shisha Pangma in the pre-monsoon season but failed to get higher than 7200 meters. Swiss led by Fredi Graf of Eiselin Sport also made an attempt which ended at 7600 meters.

XAVIER EGUSKITZA, *Pyrenaica, Bilbao, Spain*

Shisha Pangma. A French commercial expedition made up of four men and four women was led by Jean-Pierre Bernard. Base Camp was reached on August 7. On August 25, leader Bernard, Charles Davignon, Bruno Lascoumes, Michel Monnier, Emmanuelle Jacquet, Annette Nault and Brigitte Djajasasmita got to the summit. The last three named were the first French women to reach 8000 meters on Shisha Pangma. Monique Hilaire did not feel well and stayed behind