the head snows of the north arm of the Kaskawulsh Glacier from those of the Kluane Glacier at 60° 51’ N. Lat. and 139° 40’ W. Long.

ICHIRO YOSHIZAWA, Japanese Alpine Club

St. Elias Mountains, Icefield Ranges Research Project. The expansion and growth of scientific research and work in this area has been done so quietly and effectively within the past few years that its importance to mountaineers may easily be missed or overlooked. The climbers, and there have been many, who have been fortunate enough to have been guests at the Base Camp on Kluane Lake not infrequently miss the full significance of the Icefield Ranges Research Project. Its members are for the most part in the field, have not yet arrived for their season’s work, or have already departed. The brief references to the Project, appearing at the end of the season in the Geographical Review or Arctic are in the form of succinct reports that cover, in a few paragraphs, an enormous amount of work. The Project, directed by Dr. Walter A. Wood, is in reality a continuation of the work begun by him in the St. Elias Mountains as early as 1935. It is presently under the joint sponsorship of the American Geographical Society of New York and the Arctic Institute of North America. The long term objective is the study of a high mountain area in terms of its total environment. About to enter its sixth season, IRRP is engaged in carrying out programs in glaciology, glacial geology, geophysics, climatology and related fields. Within the past year work was begun in the study of plant and animal ecology in this region. During the 1965 season a total of 41 persons participated in the Project; of these, 28 were involved in scientific programs. Sixteen colleges and universities were represented. Work for one PhD has been completed; four others are in prospect. Three Masters degrees have been earned; four more are near completion. Dr. Takeo Yoshino of the University of Electro-Communications in Tokyo came with his wife Kikuko to study the effects of the Icefield Range on radio communication between Tokyo and New York. Since the icefield lies on a great circle course between the two cities, the importance of this study becomes apparent. The key to the opening of this vast area to productive scientific work and mountaineering has been aircraft. A Helio-Courier H391B plane based at a gravel air strip on Kluane Lake supplies the three main high camps on the Seward Glacier, at Glacier Divide and on the Kaskawulsh Glacier, in addition to the numerous sub-stations used for research in the region. The motto of Phil Upton’s “Flying Services, Ltd.” pasted to the wall of the Jamesway hut is quite simple: “We fly anything, anywhere, anytime, for no reason.”
CLIMBS AND EXPEDITIONS

Of particular interest to mountaineers was the overland traverse undertaken in May of 1965. At that time a party of four followed a succession of glacier courses to cross the St. Elias Range from the Pacific Ocean to Kluane Lake 150 miles away. In 1964, when the Helio-Courier lost a motor, the scientific party at Glacier Divide Camp, under the able mountaineering direction of Dr. Melvin Marcus of the University of Michigan, successfully descended the glaciers, a ground distance of nearly 75 miles, to the Base Camp. The IRRP Base Camp at Mile 1054 on the Alaska Highway has been used as a base for mountain rescue. Its presence, together with its superb mountain pilot Phil Upton and its usual complement of mountaineer scientists, is certainly a comfortable reassurance to parties climbing in the remote fastness of the range. At various times during the 1965 season members of the California Mount Logan Expedition, the Japanese Defense Academy Mount Logan Expedition, the Harvard Mountaineering Club Mount St. Elias Expedition and the National Geographic Society Mount Kennedy Expedition stopped in. Jack Wilson, bush pilot who took care of the logistics for most of these groups, frequently used the airfield. Dr. George Denton, whose small party also climbed Mount Logan this past summer, was a member of IRRP. During the relatively short summer season last year the Base Camp register listed the names of guests from four continents. Among those who came were Brigadier General Love, John C. Reed, Colin Bull, Bradford Washburn, Owen Hughes, Lt. Col. Kobayashi, the Neil Hamiltons from Christchurch, New Zealand and His Excellency J. L. Coudert, O.M.I., Vicar Apostolic of Whitehorse.

Anderson Bakewell, S.J.

Coast Range

New Routes on Mount Waddington and Stiletto Peak. During two weeks in mid-August, a group assembled by Fred Beckey and consisting of him, Jerry Fuller, Don Liska and his wife Alice and me climbed in the Waddington region. We were flown to Ghost Lake by B.C. Airlines and hiked over Nabob Pass to an airdrop and Base Camp on the Tiedemann Glacier in two leisurely days. We first chose a new route on the north-northeast face of Waddington along a spur which leads in a direct line from the Tiedemann Glacier to the gentle snow slopes above Bravo Peak, where it joins the regular route. It took a day to scramble up the quite steep rotten rock of the bottom half of the spur. We spent another day on the upper half, cutting steps in gentle but hard ice until the spur petered out into the face of the mountain. Fred did not feel well and