

of the battle. The Times historian writes: "It may be doubted whether men ever marched into battle in such a snowstorm. Accompanied by a Manchurian gale it lasted without intermission until the 28th. The mercury went down to 4° F. below zero. The ground was hard as rock. When the troops arrived within rifle range of the enemy, they found themselves on open ground affording no shelter whatever, exposed to a hail of lead from quickfiring, machine guns and rifles which the Russians directed upon them from behind Chinese houses. Darkness came on before anything definite had been accomplished, and the Japanese had to face the ordeal of passing the night in battle order without shelter of any kind, and without a spark of fire. The snow fell thickly on the already covered ground, while an icy gale blew continuously. To sleep in such conditions would have been to die. The night had to be passed with the men stamping their feet, heating their hands together, and watching to prevent anyone lying down." Another writer says: "Great efforts were made to supply warm food from the rear, but the distribution was very difficult, and consequently the men in advanced positions were obliged to eat biscuits and snow for 48 hours. It was only on the third day that charcoal reached parts of the fighting line."

And yet no cases of death or of apparent death from exposure to cold occurred. There were several cases of frost-bite, but even these were mostly mild, and of only the first or second degree. This good result was attributed largely to the excellence of the clothing, which rendered the men practically immune to the effects of cold. MacPherson states: "The troops marched and fought heavily clothed. For example the men who were brought in wounded to the dressing stations were noted to have on the following clothes: Cotton socks, drawers and vest, such as are worn in summer, with thick woolen socks, drawers and jersey over them; the thick dark cloth winter uniform trousers and tunic, with the summer khaki drill trousers and jacket over them, and the special winter goatskin waistcoat and winter greatcoat over all. A full pack was carried with straw and Chinese felt shoes attached to the valise. A blanket and blue uniform greatcoat were also attached to the pack. Knitted gloves and felt mitts covered the hands. A Balaclava cap covered the head with, in addition, sheep or goatskin ear covers; the whole being covered by the blanket hood of the winter greatcoat." To quote again from MacPherson: "The food is good, plentiful and varied. Men in contact with the enemy and on outpost are allowed more food than those in the rear. After the experience gained at Hei-kon-tai, each soldier was given an issue of sugar, which he carried in his pocket, and which he was told to eat as he lay in the positions. This not only kept him awake, but increased the bodily warmth by combustion." In a word, by the ample provision of suitable clothing and food, to well disciplined troops carefully trained beforehand in the proper precautions necessary to avoid frost bite and even death, the Japanese were able to endure almost with immunity the hardships of a winter campaign involving long nights and days of unsheltered exposure to severe cold such as occurred during the battles of Hei-kon-tai and Mukden. (Vide accompanying tables.)

It is interesting now to turn from the modern Japanese soldier well accoutred for winter, to see what has been done in Canada along similar lines. The mind goes back to Rigaud's brief expedition of healthy, carefully selected men; an expedition, which costly and unnecessary as it may have been, was certainly prepared to meet the rigors of our winter. Kingsford writes: "Unusual care was bestowed on the organization of the column. It consisted of 1,400 men, composed of 50 grenadiers, 200 volunteers from the regular troops, 250 colonial troops, 600 Canadians and 300 Indians. No pains were spared in equipping them; overcoats with pleated hoods to pull over their heads, blankets, bearskins to sleep in, tarpaulins to sleep under, spare mocassins, spare mittens, kettles, axes, needles, awls, flint and steel and many miscellaneous articles were pro-