

*Ward*: The Ward Formation is named from Wards Pass Stream, but the type section is taken as the right branch of Boulder Stream. The formation consists of green and grey sandstone and laminated and banded argillites. Its lower part is marked by a coarse green sandstone overlying dark-grey laminated argillites, which pass downward into the red rocks of the Wether Formation. The rocks of the formation in general become finer-grained upwards and the stratigraphically highest rocks are banded fine-grained argillites and sandstones. The top of the formation is everywhere faulted.

*Correlation*: A section of Pelorus Group rocks described by Waterhouse (1964) from the Lee River, 15 miles north of Chrome Stream is very similar to sections east of Red Hill. In the Lee River, red rocks outcrop for three miles and are flanked on the east and west by argillites and blue and green sandstone. The three subdivisions of the Pelorus Group given by Waterhouse (1964, fig. 3) are probably correlatives of the three formations defined above.

The rocks in the Ben Nevis Anticline and Eastern Belt are lithologically similar and have the same broad sequence. Accordingly, red-coloured rocks are correlated with the Wether Formation, and rocks stratigraphically above and below are identified as Ward and Star Formations respectively.

*Thickness*: The Pelorus Group rocks are in places isoclinally folded, and strike faulting is widespread. Stratigraphic thicknesses are therefore indeterminate. Present thicknesses of the Wether Formation are: 200ft on Ben Nevis ridge, 2,000ft in the Wairoa River, 4,000ft in the type section, and in the Lee River the formation outcrops over a width of three miles. Probably, much of this thickening is facies-controlled, as there is a continuous, unfaulted, and unfolded section at least 400ft thick in the Wairoa River. This is at least twice that on Ben Nevis ridge. It is also probable, however, that most of the increase in thickness in the Eastern Belt is due to folding and to repetition by strike faults. In the eastern belt present thicknesses of the formations are: Star, 2,000ft, Wether, 4,800ft, and Ward, 4,500ft.

*Petrography*: Most rocks of the Pelorus Group are lithic or feldspathic wackes; quartz is rare, especially in the coarse-grained rocks, which contain less than 5 percent. Feldspar fragments are albite, but they include abundant pumpellyite and epidote and were probably albitised after deposition. Lithic fragments are sediments or fine-grained spilites containing random needles of albite in an indeterminate matrix. Rarely, coarser-grained albitised fragments with a doleritic texture are present. The sedimentary rock fragments are argillite, similar to the finer-grained rocks of the Pelorus Group, and were probably locally derived. Monomineralic grains, present only in minor amounts, include iron-rich epidote, augite, fine-grained aggregates of chlorite, and, rarely, strongly pleochroic brown hornblende. The matrix of the rocks is recrystallised, but in a degree varying widely. In some cases outlines of the fragments have been completely obliterated, in others only the feldspar is altered. Secondary minerals are granular aggregates of green or colourless pumpellyite and highly birefringent epidote. The spilitic basalts are fine-grained with randomly orientated elongated laths of altered plagioclase, consisting of albite, and finely divided muscovite making about 60 percent of the rock. These are set in a matrix composed of finely granular hematite with aggregates of epidote. Rare amygdules 0.5mm in diameter are filled with iron-rich epidote.

*Provenance*: The Pelorus Group is typical of flysch facies sediments, especially in respect of sedimentary structures. The large amount of clastic volcanic and sedimentary material indicates derivation from a rapidly eroding source, and the presence of graded bedding suggests that redeposition was important. The association is therefore typically eugeosynclinal, rapid sedimentation having taken place in a deep-water trough far from a stable continental platform. Most fragments are of