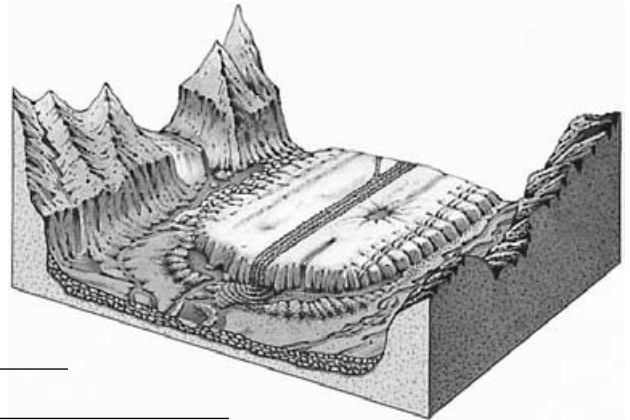


**DATELINE:** 2000. The Tasman Glacier is the largest in New Zealand's Southern Alps. It stretches for 29 kilometres in length and is 9 kilometres wide. The longest known glacier is the Lambert Glacier in Antarctica which is 400 kilometres in length and 40 kilometres in width. The fastest moving glacier is the Great Garaqaj in Greenland which travels at a rate of 7.5 kilometres a year.

1. Use the diagram on page 138 of the *Jacaranda Atlas* to mark the following features onto the blank diagram on the right:

- (a) Mountain features — **arete** (ridge), **horn**, **hanging valley**  
 (b) Valley features — **boulder clay**, **steep sided U shaped valley**  
 (c) Ice and water features — **ice margin lake**, **waterfall**, **meltwater stream**, **braided stream**, **medial moraine**, **lateral moraine**, **meltwater pool**, **englacial stream**, **terminal moraine**, **melting glacier**



Valley glacier

2. Read the information about the Tasman Glacier above and on page 138 of the *Jacaranda Atlas* to answer the following questions.

- (a) Do any glaciers still exist in Australia? \_\_\_\_\_  
 \_\_\_\_\_
- (b) A \_\_\_\_\_ is a pyramidal peak formed when cirques have cut back into a mountain. Examples include the Matterhorn in Switzerland (see page 119 of *Jacaranda Atlas*) and Mount \_\_\_\_\_ in New Zealand.
- (c) A \_\_\_\_\_ is a long inlet into a sea coast with steep sides. Originally formed by glaciers, they fill with seawater in post glacial landscapes. An example in NZ is \_\_\_\_\_.
- (d) A \_\_\_\_\_ is a mountain hollow where snow gathers, eventually forming a glacier.
- (e) A \_\_\_\_\_ is a large mass of ice formed from snow which moves slowly down a valley.
- (f) \_\_\_\_\_ is debris collected by a glacier. This debris found in a strip down the middle of a glacier is called \_\_\_\_\_, while debris found on the edges of a glacier is called \_\_\_\_\_. Debris deposited at the snout as the glacier melts is called \_\_\_\_\_.
- (g) The end of a glacier is called its \_\_\_\_\_.
- (h) The valley of a glacier is \_\_\_\_\_ shaped.
- (i) \_\_\_\_\_ valleys are formed by small glaciers meeting a large glacier. The small valley is not as deep. Upon melting of the small glacier, the small valley is left hanging up on the side of the large valley.

3. Complete the following questions by referring to the topographic map on page 139 of the *Jacaranda Atlas*.

- (a) Name the lake found at area reference 8219. \_\_\_\_\_  
 (Read the eastings first i.e. numbers at the bottom of the page which get bigger as they move eastwards. Then read the northings i.e. the numbers on the side which get bigger as they move northwards. The 4 figure grid reference refers to the whole square kilometre beginning where 82 and 19 intersect and moving northwards and eastwards.)
- (b) Name the glacier found at 8323. \_\_\_\_\_
- (c) Name the glacier found at 7722. \_\_\_\_\_
- (d) Give the area reference for Blue Lakes \_\_\_\_\_