the range 150–240°C (Table 1), and hence with our suggested figure of 200°C. The relation of the heulandite field to that of analcime has been discussed above (5.3).

There is a suggestion (Table 15) that laumontite may be stable near 300°C. STEINER has reported its formation at 195–220°C at Wairakei. Incoming of laumontite above 200°C and gradual transition to a prehnite assemblage at temperatures around 300°C seems possible and is compatible with its main field occurrences in the New Zealand Geosyncline. Nevertheless, a number of occurrences have been noted (e.g. Jurassic of Hokonui Hills and Victorian arkoses) where laumontite would appear to have been formed at lower temperatures.

Wairakite has so far been described only from active thermal areas. The sequence at Taringatura suggests that zeolitization under regional metamorphic conditions could be terminated at the laumontite stage by the coupling effect of other reactions leading to prehnite. Further, it is possible that wairakite is not stable at high pressure as shown in Fig. 14 and hypothetically in Fig. 6.

7. CONCLUSIONS
(W. S. F., D. S. C.)

(1) Recurrent formation of similar, zeolite-bearing mineral assemblages in rocks varying in age from Upper Paleozoic to Tertiary justifies the recognition of a zeolite facies. This facies largely bridges the gap between diagenesis and conventional metamorphism.

(2) As certain zeolites are stable in a silica-deficient environment to temperatures at least as high as 550°C, we propose that the zeolite facies should be defined to include at least all those assemblages produced under physical conditions in which the following are commonly formed: quartz–analcime, quartz–heulandite, quartz–laumontite.

(3) In sedimentary rocks the characteristic minerals include heulandite and analcime with quartz in a low grade stage, and laumontite, albite and quartz in a higher grade stage; together with adularia, celadonite, saponite, montmorillonoids, chlorite, calcite and sphene. In silica-deficient environments thomsonite is considered to represent an equivalent stage of metamorphism.

(4) In well-studied areas, there is a general tendency for less hydrated zeolites to occur at higher temperatures in conformity with experimental results and thermodynamic prediction.

(5) There is a tendency for zeolites to fall into three groups according to their mode of occurrence: silica-poor zeolites favoured by an environment lacking free silica; zeolites which coexist with quartz; and highly siliceous zeolites which may only be stable in solutions supersaturated in silica with reference to quartz.

(6) Where zeolitization is confined to the cements in sediments, or to cavity fillings in other rocks the assemblages of new-formed minerals may be considered in terms of ESKOLA's mineral facies concept. In this respect we are extending the range of the zeolite facies proposed by TURNER for metamorphic assemblages only.

(7) Between the rocks of the zeolite facies and typical greenschist facies in New Zealand, there is a very extensive zone characterized by prehnite and/or pumpellyite. There appears to be justification for the erection of a distinct subfacies