

Table 3. World correlations between northern and southern hemispheres, based on the New Zealand scheme, with some uncertainty over Ural correlations. Brachiopod and molluscan indications of paleoclimate are noted where examined, showing how strongly the world faunas fall in one pattern of 3 glaciations, (centred near Tasmania as noted by "ice"), with cool faunas in correlative beds elsewhere, followed by a recovery period with "warming" temperatures, then by warm-water faunas.

| New Stage | New Zealand | Tasmania | Western Australia | Siberia | Composite Canada | Ural Mts |
|-----------|---------------------------------|--|---|------------------------|---|--------------------------------|
| 9 | Makarewan warm | Cygnets Coal Measures | | | | |
| 8 | Waiitian cool | Ferntree ice | | | | Tatarian |
| 7 | Puruhanu warm | Mudstone warm? | | Hivatch horizon warm | ? <i>Atomodesma</i> beds warm | |
| 6 | upper Braxtonian warming | Malbina E warming D C | | Gijigin Omolon warming | Ranger Canyon-Fantasque warming | Kazanian warming |
| 5 | lower Braxtonian cool | ice B (Grange) A | ? ?Coolkilya warming high Byro cool | Djigdalil cool | Assistance Fm. cool | ?Ufimian |
| 4 | Mangapirian warm | Berriedale Limestone warm | lower Byro Group warm | Djeltin Munugdjak | upper Middle Recessive unit warm | Baigendzinian warm |
| 3 | Telfordian warming | Nassau Sls warming | Wooramel Gp warming Callytharra Fm. | Yasnachin | middle "Middle Recessive unit" | Artinskian ?Upper Sakmarian |
| 2 | <i>Mourlonia impressa</i> cool? | Quamby Mudstone ice Wynyard Tillite | Lyons ice | Irbichan cool | Ross Creek cool <i>Attenuatella</i> zone | Sakmarian |
| 1 | <i>Atomodesma</i> beds warm | | Group warm | Burgali warm | <i>Reticulatia</i> zone warm | Asselian |

Siberia. These invasions, coinciding in time with the southern glaciations, as we know from ammonoid and other evidence, must have reflected reduced temperatures in the northern polar regions (Table III). The scheme of alternating changes in temperature deduced from the New Zealand Permian faunas applies to faunas from high and temperate latitudes all over the world. The New Zealand scheme is not only internally consistent; it is relevant to the world. It would take very special pleading to escape the conclusion that the procedures for detecting the paleoclimatic significance of brachiopod and molluscan genera are essentially correct. Of course, it must be said that the methods are at present largely unpublished. It would seem to me pointless to bring out such studies in any depth before the systematic section of my work is completed. For the systematics, geographic distribution and age are fundamental. This is illustrated by the occasional error in my work, in prematurely trying to decipher the paleoclimatic range of a genus by way of illustrating a principle rather than being very serious about the particular details of the individual genus.

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