these fossil-sequences in the world are Siberian and East European Platform, Mongolia and China, now reinforced by discoveries in the Tal Formation.

Considering the present record to be the extension of the studies carried out earlier, it is apparent that the brachiopod assemblage of Early Cambrian (Botomian Stage) constitutes a widely developed chronostratigraphic level in the lower part of the Phulchatti Quartzite Member of Tal Formation in Lesser Himalaya, and with further search can be located in other Synclines of Lesser Himalaya exposing Krol-Tal succession.

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formed causing friction to reduce between the mating surfaces. However, a part of the lead on the wear track is swept by the pin surface to accumulate at the edges of the track and this depleted lead is continuously replenished by further extrusion of lead from the pin surface and its subsequent transfer to the disc. In this process, a uniform and relatively stable film of lead is thus maintained between the mating surfaces causing practically no further increase in temperature of the pin due to frictional heating. However, as has been shown\(^2\) in the case of copper-lead alloys, a minimum thickness of the lead film is required below which the latter is not effective in reducing the friction. Further, with increasing lead content of the bearing alloy, a greater supply of lead is readily available to replenish the local exhaustion of lead and maintain the necessary lead film thickness. This may be the reason why the temperature rise of the specimen decreases as the lead content of the alloy increases from 10 to 35 wt.\%.

However, when lead is available in excess supply (e.g., in alloys containing > 35 wt.\% Pb), it may possibly form too thick a lubricant film of lead, increasing the track depth and the area of contact\(^4\) which enhances the frictional resistance and hence, the frictional heat between the mating surfaces. Friction may also increase at such high lead contents since the bearing alloy becomes mechanically quite weak\(^3\) to facilitate local yielding and welding. That is why a larger increase in temperature of the specimen is recorded when lead exceeds 35 wt.\% of the bearing alloy. The measurement of the coefficient of friction for different alloys after the specimen has slid a distance of some 5 km (table 1) also substantiates the above results, since the friction coefficient decreases with increasing lead concentration up to 35 wt.\% Pb only. This work thus shows that lead is effective in reducing friction only in the concentration range of 10–35 wt.\%.

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