

UNDESCRIBED FOSSIL INSECTS FROM  
THE UPPER PERMIAN OF  
BELMONT, NEW SOUTH WALES  
(With an Appendix Listing the Described Species)

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Plate 45. Figures 1-5.

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**SUMMARY**

Five unusual or problematic fossil insects from the Upper Permian of Australia are described and illustrated.

The Upper Permian strata at Belmont has yielded a rich and varied insect fauna. Those orders which constitute the dominant elements of the fauna have been studied and the species described in a number of papers by Tillyard (1918, 1919, 1921, 1922, 1924, 1926a, 1926b, 1929, 1935a, 1935b, 1935c), Evans (1943a, 1943b, 1947, 1950, 1956, 1958, 1963), Davis (1942, 1943), Riek (1953), and Kukalova (1966).

Although most of the fossil insect specimens have been studied, there remains unrecorded a small number of unusual and very interesting species. In some cases the affinities of these fossils are obscure while in other cases the remains are rather fragmentary and, although for these reasons one refrains from naming them, they are worthy of discussion even if only to indicate the presence of certain archaic orders of insects which have not previously been recorded from the Australian Permian. As extensive collecting of this horizon is unlikely to be undertaken in the near future, it is considered appropriate that the remaining components of the fauna should be recorded.

Only five specimens are considered worthy of discussion, though there are several interesting fragments that defy classification at present. These are mostly small fragments of relatively large wings. Only one of the five specimens discussed below is formally named.

**Specimen F.40701 Australian Museum**

(Plate 45, figure 1; Figure 1)

This specimen is considered to be a nymph in which fore and hindwing rudiments and portion of the body are preserved. The impression of the rudiments of the venation preserved on the nymphal wing sheaths indicates relationship to the Plecoptera or Paraplecoptera. Paraplecoptera have not been recorded from this horizon (a fragment described below is referred to the order) but there is a single described species of the Plecoptera. It is suggested that this nymph should be referred to the Plecoptera and considered as being most probably a nymph of *Stenoperlidium permianum* Tillyard, 1935. A comparison between the nymphal venation and that of the adult shows some differences but these are limited to the terminal branches of the veins.