now decomposed, the nodular structure of which is here and there still perceptible. This material continued to the eastern end of the cutting. Crossing the paddocks in a north-easterly direction, the creek was soon reached, where we immediately came upon recent ferruginous sandstones in the sides of the creek, closely simulating in some respects those we had just left, which were of Tertiary age.

The creek for some distance has eroded its course down into the Upper Silurian rocks, and along its windings these were continued till we reached the cliff. One of the first features to attract attention here were the "ripple markings" on some of the thicker of the sandstone beds. The fact as to whether these markings were really ripple marks had been disputed, and the evidences for and against were discussed with much interest, the unanimous verdict being finally in favour of their being such. Descending a few yards lower down the creek, by the cliff, a diligent search was made for examples of the fossils for which these rocks are famous, and numerous specimens were collected.

The next point to receive attention was the decomposed "Elvan" dyke, and the disturbance in adjacent rocks was noted. Ascending the steep bank to the roadway immediately above the dyke and a few yards to the north of its appearance in the road cutting, a small anticlinal fold was observed in the Silurian rocks. From here the road was followed northwards into the cutting at the western end of Union-street, Brunswick. Almost immediately above the cliff Tertiary deposits were again met with, crowning the summit of the hill of Silurian rocks in that locality, and were seen to rest directly on them, its unconformability with the Silurian being distinct. Expressions of satisfaction at the afternoon's observations were exchanged, and the party dispersed.

Among the specimens obtained from the Tertiary grits were the following:—Plant remains—Ancillaria, Peristerina, Haliotis, Mactra, Leda; and from the Upper Silurian rocks—*Orthoceras ibex*, *Rhynchonella decemplicata*, Trematospira, Orthis.—Geo. Sweet.

PRELIMINARY DESCRIPTION OF A NEW SPECIES OF APUS.

By Professor Baldwin Spencer and T. S. Hall, M.A.

The following is a brief description of a new species of the genus Apus—the first which has as yet been described from Australia.

Apus australiensis, sp. n.

Carapace a short oval. Its length about equal to the length of the portion of the abdomen which is not covered by the carapace, though this is liable to considerable variation.

Proportion of greatest breadth of carapace to its median length, 4 : 3.

Length of carina compared with that of carapace, 2 : 3.

Length from posterior end of carina to posterior angle of carapace, 1 : 2.

Length of carina compared with median length of carapace, 2 : 3.

Carina minutely and irregularly serrated and ending in a spine posteriorly.

Sinus of the carapace with about 18 minute teeth on each side of the mid line : sometimes rudimentary or absent in some parts of the margin.

Posterior outer margin of the carapace with minute serrations which gradually become more minute on passing forward, until they disappear at about half the length of the carapace.

Dorsal surface of the carapace sparsely covered with irregularly scattered minute blunt projections.

Number of abdominal segments uncovered, about 29.

Number of abdominal segments not bearing limbs, about 12.

Each limbless segment of the abdomen with about 15 sub-equal, short, conical spines, arranged in a single row, with numerous smaller ones irregularly scattered over the under surface.

The exposed limb-bearing segments with spines on the upper surface and sides, becoming obsolete in the anterior segments.

Telson a little less than twice as long as broad.

Upper surface of telson with 3 or 4 median spines ; a spinous posterior border and sides and 2 or 3 spines forming a group on each side anteriorly.

Lower surface of telson minutely spinulose, with a median and two lateral depressions, free or nearly free from spines.

Caudal appendages considerably longer than the median length of the carapace.

Second antennæ absent.

The 5th endite of the 1st thoracic appendage varying much in length. It may reach as far back as the 15th exposed abdominal segment, or it may reach only to the posterior end of the carina.

No difference in size or proportions between the males and females.

Total length of the largest male, from the anterior margin of the carapace to the end of the telson, 70 mm.

Total length of the largest female, 64 mm.

Out of a total of 58 individuals, 6 are males, 52 females.

Locality.—Central Australia. In waterholes at different localities between Oodnadatta and Charlotte Waters (W. B. Spencer). A single specimen, collected by Mr. J. A. Kershaw, was found near Kewell, Victoria, and has been kindly placed by him at our disposal.