

spectrum except that under observation. The words in my book written at the time are, "narrow slit found to be best at focus of little telescope with positive eyepiece." In the note the second slit was stated to have been placed before the object-glass of the little telescope. Such an arrangement was tried in connexion with some other experiments in progress at the time. The plan of limiting the field of view to the part of the spectrum corresponding to the refrangibility of the light of the prominence, as well as the employment of a ruby glass, is of value when the air is not favourable, or when a spectroscope of small dispersive power is used.

III. "On the Fossil Mammals of Australia.—Part VIII. Family MACROPODIDÆ: Genera *Macropus*, *Osphranter*, *Phascolagus*, *Sthenurus*, and *Protemnodon*." By Professor OWEN, F.R.S. &c. Received November 11, 1872.

(Abstract.)

In the present Part of the series of papers on the Fossil Mammals of Australia, the author enters upon the description and determination of the fossils referable to the family of Kangaroos (Macropodidæ), restricting, however, the latter term to the species in which the molar teeth have two transverse ridges for the chief character of their grinding-surface, and excluding the Potoroos (Hypsiprymnidæ), in which the working-surface of the molars is formed by four tubercles in two transverse pairs.

The large extinct species of Kangaroo indicated under the names *Macropus Titan*, *M. Atlas*, and *M. Anak* in former publications ('Mitchell's Three Expeditions into the Interior of Eastern Australia,' 2 vols. 8vo, 1838, Palæontological Appendix, vol. ii. p. 59, pls. 24–32; also 'Proceedings of the Geological Society of London,' vol. xv. p. 185, 1858) here receive further elucidation of their specific distinction from any known living Kangaroos and of the grounds (according to the value assigned thereto by present zoologists) for referring two of these (*M. Atlas* and *M. Anak*) to distinct subgenera of Macropodidæ.

As the extinct Kangaroos which the present paper defines are chiefly represented by fossil jaws and teeth, some remarks on the dentition of existing Kangaroos, with requisite illustrations, are premised, and the parts of the complex molars are defined.

The author then enters on the elucidation, aided by the facts premised, of *Macropus Titan*, *M. affinis*, *Osphranter Cooperi*, *O. Gouldii*, *Phascolagus altus*, *Sthenurus Atlas*, *S. Brehus*, *Protemnodon Anak*, *P. Og*, *P. Mimas*, and *P. Ræchus*.

The maxillary, mandibular, and dental characters of these extinct species are illustrated by the subjects of eight Plates.