

It has been suggested that the increased frequency with which haloes and parhelic phenomena, especially of the rarer types, have been observed of recent years is due to some special tendency of condensation trails from aircraft to crystallize in the appropriate manner. Trails were being formed in other parts of the sky before and during the observation of II and III, but the clouds manifesting the parheliion were not seen to be formed from them and had the general appearance of natural cirrus. No trails were noted on occasion I, but the clouds, which were of normal cirrus texture, had an unusual disposition. Some eight to ten dense, parallel bundles of cirrus wisps, somewhat entangled, evenly occupied a rhombus of about 20° side, outside which the sky was conspicuously cloudless.

I am unable to offer any explanation of II. I might possibly be the rare and doubtful parheliion of 35–38°, set back by the high altitude of the sun. On the basis of Pernter and Exner's¹ tentative theory of this phenomenon, the computed bearing from the sun is 155° (observed 160–165°). Their doubts, however, have special force in this case owing to the high altitude of the sun and the extreme brilliance of the phenomenon. This explanation is quite unacceptable for II (theoretical bearing 179°). III cannot have been the primary parheliion of 46° owing to the high altitude, but might have been the secondary parheliion of 2 × 22°.

I have taken the liberty above of introducing the word 'meteoroptical' in place of 'meteorological optical', which is cumbersome.

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¹ Pernter and Exner, "Meteorologische Optik" (1910 edit.), 392.

Antiquity of Man in Australia

It was very gratifying to read Prof. F. Wood Jones' article and also Dr. F. E. Zeuner's appraisal of the Keilor skull discovery¹. In Australia, the significance of the skull has only been appreciated in part, a fact which can largely be explained by preoccupation with the War. Mahoney's scholarly memoir² has indicated that, even if his altimetric estimation of the age of the skull is not accepted as final, every endeavour should be made to conserve all relevant data available.

The deposit in which the skull was found is very limited, probably of less than an acre; nevertheless the site of the discovery is still being exploited as a sandpit, and although contemporaneous deposits no doubt will be found, no attempt has been made to preserve the site for a thorough scientific search.

Furthermore, I am given to understand that the sand contractor who found the original skull had in his possession another skull, bones and possibly artefacts, which seemingly will be lost to the scientific world.

Zeuner expresses the hope that "the Keilor discovery will encourage further search for early man in Australia". It is suggested that a more urgent task for Australian science is not so much archaeological as anthropological, for in the sociology of the few remaining tribalized aborigines we have the key to our own social evolution which, even if the aborigines themselves do not die out, will, in a matter of a few decades, be irretrievably lost.

The riddle of the world-wide mother-in-law taboo³

can only be solved by assuming social conditions in the past similar to those of the Australian aborigines, and it has been indicated how man's earliest social evolution must have been determined by the progressive avoidance of incest. The structures of Australian societies show how this avoidance was obtained by the introduction of taboo and exogamy⁴.

It is therefore to be regretted that in the southern hemisphere there has been during the past few years a marked swing away from the study of the Australian aborigines towards the study of the more colourful island people to the north of Australia, whose societies will still be virtually intact when those of the Australian aborigines will be, like the Tasmanians, a thing of the past.

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¹ *Nature*, 153, 211, 622 (1944).

² *Mem. Nat. Mus. Melbourne*, 13, 79 (1943).

³ Jolly and Rose, *Man*, 42 (Jan-Feb. 1942).

⁴ Jolly and Rose, *Ann. Eugen.*, 12 (July 1943).

A New England Naturalist

IN connexion with the interesting and entertaining review¹ by Sir D'Arcy Thompson of Dr. Barbour's book "A Naturalist at Large", it is worth putting on record that the Zoo has had two specimens of the Páca rána (*Dinomys branickii*) from South America during the past twenty years. The first was presented by Mr. Herbert Whitley in June 1925 and the second was purchased from a dealer in September 1929.

At death, both bodies were preserved, the former being sent for dissection to Dr. A. B. Appleton at Cambridge, the latter to Tring Museum at the request of the late Lord Rothschild.

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¹ *Nature*, 154, 411 (1944).

Photochemistry in Retrospect

DR. IREDALE¹ discusses in his retrospect on photochemistry the surprising fact that Einstein's Law of Photochemical Equivalence seems to be almost forgotten by modern photochemists. This oblivion is still more astonishing if one remembers the role of the law in general chemistry.

From the beginning, it was quite clear that any experimentally established failure of the law in a complete photochemical reaction was due to purely chemical secondary reactions. These are independent of the photochemical primary processes, which are without exception controlled by Einstein's Law. E. Warburg's² finding that not one molecule as expected but two molecules of hydrogen iodide are decomposed by one light quantum led him to the fundamental assumption of the interaction of short-lived hydrogen and iodine atoms in the secondary reaction chain. This chain reaction is the model for all modern conceptions of chemical and photochemical reaction kinetics, which operate with free atoms or radicals.

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¹ *Nature*, 154, 326 (1944).

² *Ber. Berlin. Akad.*, 314 (1916).