

### The First Description of a Kangaroo.

I HAVE just read in NATURE of February 26 (p. 715) a letter by Mr. W. B. Alexander concerning the discovery of Australia and the first description of a kangaroo. It is stated there that the first discovery of this animal was made, not by Sir Joseph Banks on Captain Cook's first voyage in 1770, but by Pelsart in 1629. May I be allowed to point out that a description of a kangaroo is to be found at a much earlier date, viz., in the "Decades" of Peter Martyr, published shortly after 1500. Unfortunately this book is not accessible to me at present, so I must only point to numerous publications of Mr. Edward A. Petherick, of the Federal Government Library, Melbourne, concerning the discovery of Australia, who claims this honour for Amerigo Vespucci. According to Mr. Petherick, Peter Martyr states that in 1499 a southern coast was discovered (probably by Vespucci) in which trees grew of such magnitude that sixteen men standing around one could scarcely encompass it (this would correspond to south-west Australia, between King George's Sound and Cape Leeuwin). Amongst these big trees was found a monstrous beast, with the head of a fox, the hands of a man, the tail of a monkey, and that wonderful provision of nature, a bag in which to carry its young. The beast so described was caught alive with its young, but during the long voyage both died. The carcase of the dam was taken to the Court of Ferdinand and Isabella in the year 1500. This description is not as detailed as that by Pelsart; nevertheless it cannot easily be doubted that it refers to a kangaroo, which seems to have been known for the first time so far back as the end of the fifteenth century.

The coast in question is supposed to have been discovered by Diego de Lepe, whose pilot was Vespucci.

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### The Movements of Floating Particles.

WILL any physicist be good enough to explain the following to an ignorant amateur? If a clean saucer be half-filled with a decoction of tea on the surface of which bubbles or unwetted shreds of ash (as from the consumed paper round the lighted end of a cigarette) are floating but not in a continuous layer, then if the decoction, after coming to rest, be gently rocked the floating particles will partake of its perpendicular, but little, if at all, of its lateral motion. Sunken particles, on the other hand, will partake of the lateral motion. Again, if the saucer be gently tilted the fluid will flow away, but each floating particle will remain stationary, and will be deposited under its original position.

Why do not the particles partake of the lateral motion? Does the surface of the decoction form an incompressible, but flexible, film, which (in the saucer) may be added to but not subtracted from, under which the rest of the fluid slides with little friction. And when the fluid flows away does this film remain behind to form that portion of the fluid that wets the saucer? Or do solid, but invisible, particles come up and form a continuous sheet on the surface? Against the latter supposition is the fact that particles dropped on the advancing edge of the decoction remain stationary. Particles floating on the surface of ordinary tap water move with it much more freely; water in which table salt has been dissolved behaves like tap water. But even in sea water we see froth left behind by receding ripples.

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### KINEMATOGRAPHY AND ITS APPLICATIONS.

MR. TALBOT is to be congratulated on having produced a book which must appeal strongly to the interest of the general reader, even though he may have no intention whatever of becoming a "kinematographer." A word here on this terrible term. It may be correctly derived from the Greek, while it certainly admits of many pronunciations, variously wrong, but the frequent collision with these six syllables when otherwise interested must impress upon the reader of Mr. Talbot's book the desirability of finding some new word of one syllable, not derived anyhow, such, for instance, as the mechanic and the electrician have found in the words crank and boost, so that neither attention may be arrested nor printing ink and paper wasted.

The main purpose of the book is to show what has been done in many different fields and the nature and cost of the apparatus which an amateur would be likely to use, rather than to give instruction in the details of the art. Incidentally, the commercial value of lucky-chance films of the amateur is pointed out, but it is not very clear what the cost of the unlucky-chance miles of film that will be worth nothing is likely to be.

On first opening the book the reader will see a picture of a fine cow which appears to have suffered at the hands of the cattle-maiming gang. Closer inspection will show that the injury is a door in the side of the beast, which, according to the legend below, is 15 ft. high. It was made by Messrs. Newman of *papier-mâché*, so that the operator might get inside with his camera with the intention of taking lions and other beasts unawares. Passing on from this testimonial to the credulity of the savage beast, we find numerous full-page or half-page enlargements of single pictures taken from the strip, so perfect in focus and detail that it is scarcely possible to believe that it has all been derived from a miniature  $1 \times \frac{3}{4}$  in. only in size. A reference to some of these only will indicate the great variety of subject which is open to those who practise this new art. There are lions at lunch in the jungle, a polar bear diving in the arctic sea, birds feeding their young, a vulture preparing to fly, and taken at such close quarters that every feather is clearly defined, eighteen successive photographs taken during a single beat of a pigeon's wing, and fifteen of the opening of a convolvulus, both from the Marey Institute, two X-ray films from the same institute by M. Cavallo, one of sixty pictures showing digestion in the intestine of a frog, and thirty of the movements of the gizzard in a fowl, and others from the same quarter.

Then by the aid of the microscope and the "ultra-microscope," smaller forms of life may be seen in motion. For instance, there is the head of a spiny monster which is nothing more than a blue-bottle eating honey from off a needle, and there might have been, but are not, illustrations

<sup>1</sup> "Practical Kinematography and its Applications." By Frederick A. Talbot. Pp. xii+262+plates. (London: W. Heinemann, 1913.) Price 3s. 6d. net.