justly undertake, and we might then expect to hear less of the little interest felt in the science by the general public. When we have an "applied anthropology" to our daily life, and a system of anthropology taught in our public schools, we shall wonder how it was that the science so long remained in the esoteric stage. However, paradoxical as it may seem for the writer to admit, no science has been illustrated by so many excellent handbooks and compendiums as anthropology. From the time of Prichard to the works of Lubbock, Peschel, and Tylor, there have always been competent workers and writers, and the last-named works represent the very essence of our knowledge on the subject. In the face of this there is still a vast and unrecognised mass of material waiting extraction from the total annual literature of each country.

One other work requires compilation, and refers to the past. How frequently a traveller or missionary, anxious to write fully on the people he has visited, and wishing at the same time to have his views enlarged by the opinions of others, inquires for the list of authors and authorities who have written on the same subject. With very few exceptions such a desideratum is unprocurable, and yet if we would at present understand the social position of any tribe, however degraded or improved, the records of their earliest visitors must be compared with the narratives of their latest describers. This again can only be the work of a specialist, who, having carefully searched for and studied the literature relating to some particular tribe or race, would voluntarily present his "bibliography" to students at large, and for that purpose endeavour to have the same published by his local or some other anthropological society. These lists, if once begun, would slowly accumulate, and would not only confer lasting fame on their compilers, but also, by their publication in the *Transactions* of the societies devoted to the study of man, make the contents of those works more valuable by their presence, and at the same time promote the absence of some memoirs which a further knowledge of the subject would render somewhat unnecessary.

It is, however, only in the hope of further suggestions from other workers, that I have ventured to obtrude these remarks in the columns of NATURE.

W. L. DISTANT

A Modification of the Gold-leaf Electroscope and a Mode of Regulating its Charge

THOSE who experimentalise with the usual form of gold-leaf electroscope must know well that the instrument requires a vast amount of preparation and drying before it is ready for use, and also that in wet weather it keeps its charge but a little while. At the same time the electroscope when in good order is a beautifully sensitive instrument and of great value in demonstration. I have made a slight addition to the present form of instrument, which makes it useful in all states of the weather. A flat spiral is cut out of sheet ebonite with a fret saw, about 8 mm. wide, and 4 mm. thick; the diameter of the spiral is the same as the internal diameter of the glass shade; the spiral is cemented to the shade just below the line at which its dome begins; the centre of the spiral carries the brass rod to which the gold leaves are attached; the rod comes up through the top of the shade without touching it; thus a very long insulator is placed between the charged leaves and the surface of the shade; on a damp day the leaves are powerfully divergent two to three hours after being charged. If instead of the spiral a little tube of ebonite takes the place of the usual varnish glass tube, the charge will be kept a fairly long while.

If the same angle of divergence of the gold leaves be required in two similar electroscopes, charged, say, with electricity of opposite sign, this can be effected by fully charging each instrument, and then bringing a lighted candle about ten centimetres above the brass disc or knob of each; by lowering or raising the candle, the charge can be drawn off as slowly as you please. It is well known that a flame has been used ATTACHED to an electrometer in testing atmospheric electricity. Volta used a flame connected to an exploring rod, and in Sir W. Thomson's electrometer a slow-burning match is used; but it will be noticed that in the experiment I have described for regulating the charge, the flame is only held near the disc or knob, but is NOT allowed to TOUCH IT. I also find, and it is very remarkable, that electroscopes can be fully charged by placing them about a metre from a charged jar, if a taper be now placed on the top of the jar, by means of an insulator the leaves instantly diverge and the electroscopes remain charged.

FREDERICK JOHN SMITH
Taunton, November 18

Palæolithic Gravels

THE subject of the preservation of human remains in drift beds has been so fully discussed by every author who has written on the antiquity of man, that it would be mere waste of space to reprint what has been so many times printed before. No doubt the day will one day arrive when we shall have plenty of examples of the osseous framework of palæolithic man; at present but few of his bones have been found for study. Human bones are extremely liable to decay, but no doubt some of our palæolithic precursors are preserved somewhere; they will be lighted on some day.

In 1878 I had an opportunity of removing the stones from several cairns at Cynwil Gaio, in Carmarthenshire; the kist-vaens or stone graves were then exposed. On carefully removing the covering stones from each kist, the place in which the human body was originally deposited was laid bare. The soft, smooth bed of fine clay (brought from a distance) was there on which the body was placed at the time of burial, but not in a single instance was there a trace of a bone, a tooth, or any relic whatever of the body; it had entirely vanished. Now if we can find nothing in a grave that is only a very few thousands of years old, what can we expect from one that is tens or possibly hundreds of thousands?

When Prof. T. McK. Hughes lectured on the Antiquity of Man before the Victoria Institute he said (reprint p. 8): "I will not waste time to discuss whether the objects we refer to man, now found in numbers in post-glacial river-gravels, are really of human work." The Professor was quite right, for any one who can see any art in the Parthenon, or any human work in Raphael's Cartoons, ought to see art in palæolithic implements; and, of its class, uncommonly good art too. But none are so blind as those who won't see, and many persons have not strength of mind or courage enough to accept the teaching of their own reason.

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Ancient Monuments

WHILST in North Wales last autumn, I visited the famous Kist-Vaen, on Tynycoed Farm, Capel Garmon, not far from Bettws-y-coed. This is a sort of double subterranean cromlech, the single cap-stone now remaining being on a level with the ground. On two of the large upright supporting stones, two blockheads had painted their names in green oil-paint from top to bottom of the stones. The trouble of taking the green paint and brushes to this place must have been considerable, and I hope now that General Pitt-Rivers is appointed Inspector of Ancient Monuments, he will find these parties out, and make them take a painful of turpentine, and rub out the offensive inscriptions.

I also visited the two circles of stones, termed on the Ordnance Map Maenan-hirion, by Penmaenmawr, and looked out for the two outlying stones stated to be on the north-east side of the larger circle. I could not see them; there is a large naturally-imbedded boulder on the east-south-east side, but the intermediate one has been removed. Whilst I was at the smaller circle, I noticed that one of the stones had recently been pulled out of its setting, and was lying beside the hole.

The great camp on Penmaenmawr was plentifully bestrewn with sandwich papers and empty bottles, but the immense walls and hut circles of our forefathers defy the efforts of excursionists to a great extent. I, however, saw several of these terrible persons on the top, taking off the stones from the ancient walls and throwing them down below.

I noticed several other stones in the neighbourhood of the circles that had recently been thrown over.

In some of the more romantic and rocky situations in Wales—places visited by "cheap trips" (as near Bettws)—the rocks and even highly-esteemed antiquities—as the elaborately carved roadside cross at Carew, Pembrokeshire—are plastered over with printed bills about auctions, tea-meetings, sermons, and quack medicine.

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Shadows after Sunset

IN reference to Mr. Douglas Archibald's letter, I may say that in 1873 I made three drawings of the "Sheaf rays" at the Isle of Wight. In these they are marked as "con-